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IMPETIGO CONTAGIOSA NEONATORUM

WITH A REPORT OF FOUR EPIDEMICS *

JAMES J. SWENDSON, M.D.

AND

SEYMOUR R. LEE, M.D.

ST. PAUL

During the past fourteen years, the increased incidence of a contagious skin disease of new-born infants, in both its endemic and its epidemic form, has become a distressing problem in hospital nurseries in this country and abroad. The access of impetigo contagiosa neonatorum to obstetric nurseries has complicated nursing technic, added to the expense of hospital administration, and in the minds of parents and relatives has injured the reputations of hospitals and physicians. While the disease has usually been of a mild type and unassociated with systemic disturbances, it has sometimes appeared in a severe form, and at Ancker Hospital, the city and county hospital of St. Paul, during the past two years it has been responsible for two deaths. A discussion of the disease and its treatment, and a review of our experience with it is therefore presented in the hope that it may be of value.

HISTORICAL NOTES

Contagious impetigo of children and infants was first described by Tilbury Fox [1] in the *British Medical Journal* in 1864. Serious epidemics in infants were described by Ochene [2] in France in 1773, and by Rigby [3] in England in 1834. Ritter [4] recorded epidemics in a foundling hospital in Prague in the years 1878 to 1880 with a mortality of 48 per cent. Maguire [5] described an epidemic in 1903 with a mortality of 44 per cent in eighteen cases. In 1906, Clegg and Wherry [6] studied the disease in Manila, where it was endemic in nurseries for the new-born. Schwartz [7] reported twenty-seven cases with seven deaths at the New York Lying-In Hospital in 1908. Biddle [8] reported an epidemic in the Women's Hospital of Detroit in 1912 with no mortality, which had been preceded by one in 1910 with a 30 per cent mortality. In 1914 Cole and Ruh [9] reported nine cases and reviewed the literature up to that time. Falls [10] investigated five small epidemics occurring in Chicago in 1915 and 1916.

Reed [11] made the noteworthy observation that there were, curiously enough, no widespread epidemics of impetigo in nurseries until 1917, fifty-three years after the recognition of the condition by Fox. At that time, however, as his questionnaire to many hospitals in this country revealed, an infection previously rare and sporadic suddenly changed in character and appeared in hospital nurseries everywhere as more or less virulent epidemics. It has continued to be a hospital problem and there have been numerous reports of epidemics in the literature since 1917.

BACTERIOLOGY

It is not our intention to review the bacteriologic investigations that have been made since Demme [12] in 1886 isolated and cultivated a nonchromogenic diplococcus from the lesions of "acute pemphigus," and Almquist [13] in 1891 showed that the infecting organism on culture closely resembled *Staphylococcus pyogenes-aureus*. Attention is called, however, to the confusion caused by Sabouraud [14] in 1900 by concluding that impetigo contagiosa was primarily of streptococcic origin. In the same year it was shown by Matzenauer,[15] and it has been confirmed by numerous subsequent observers, more recently by Belding [16] and by Falls,[17] that the responsible organism is a specific strain of *Staphylococcus aureus* of variable virulence. Falls believes that this organism frequently may be derived from common skin lesions such as acne and furunculosis.

NOMENCLATURE AND DEFINITION

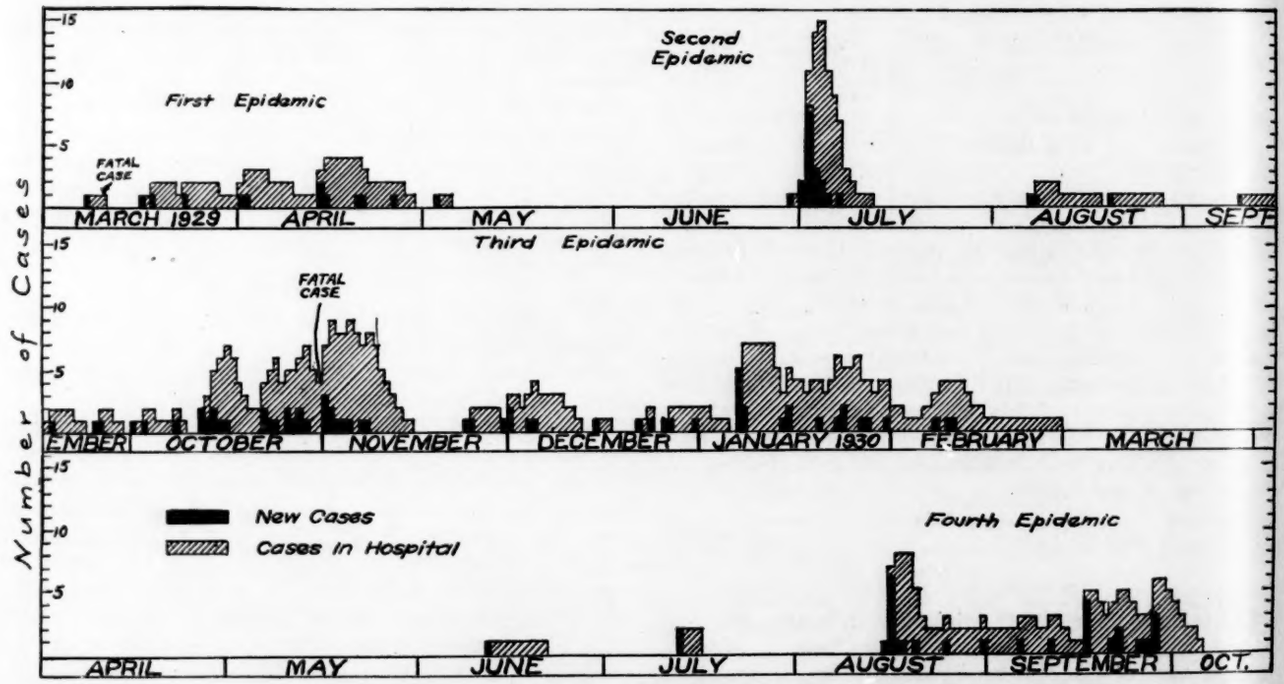
Because the disease manifests itself in various forms, confusion of terminology has characterized the literature. True impetigo of new-born infants is of the vesicular type and is usually mild. When vesicles coalesce rapidly and large areas of exfoliation appear, exfoliative dermatitis becomes the proper term for designating the

* From the Department of Obstetrics and Gynecology, University of Minnesota Medical School, Ancker Hospital Service.

1. Fox, Tilbury, quoted by McCandlish, H. S.: Report of 224 Cases of Impetigo in the New-Born, Am. J. Obst. & Gynec. **9**: 228-234 (Feb.) 1925.
2. Ochene, quoted by Brocq, L.: La pratique dermatologique, Paris, Masson et Cie **3**: 829, 1902.
3. Rigby, E.: General Lying-In Hospital Report: Pemphigus Infantilis, London M. Gaz. **17**: 125 (Oct. 24) 1835.
4. Ritter, quoted by Benians, T. H. C., and Jones, B. H.: Pemphigus Neonatorum, Lancet **1**: 174-176 (Jan. 26) 1929.
5. Maguire, G. J.: Acute Contagious Pemphigus in the Newly Born, J. Obst. & Gynec. Brit. Emp. **4**: 549-554 (Dec.) 1903.
6. Clegg, M. T., and Wherry, W. B.: The Etiology of Pemphigus Contagiosus in the Tropics, J. Infect. Dis. **3**: 165-171 (March 2) 1906.
7. Schwartz, H. J.: An Epidemic of Pemphigus Neonatorum, Bull. Lying-In Hosp., New York **5**: 1-21 (June) 1908.
8. Biddle, A. P.: A Consideration of Two Outbreaks of So-Called Pemphigus Neonatorum, J. Cutan. Dis. **32**: 268-275 (April) 1914.
9. Cole, H. N., and Ruh, H. O.: Pemphigoid of the New-Born (Pemphigus Neonatorum), J. A. M. A. **63**: 1159-1164 (Oct. 3) 1914.
10. Falls, F. H.: The Bacteriology of Pemphigus Neonatorum, J. Infect. Dis. **20**: 86-98 (Jan.) 1929.
11. Reed, C. B.: Impetigo or Pyodermatitis Neonatorum, Am. J. Obst. & Gynec. **17**: 49-58 (Jan.) 1929.
12. Demme: Ueber Pemphigus acutus, Verhandl. d. V. Kong. f. inn. Med., Wiesbaden; supplement to Centralbl. f. klin. Med. **7**: 54-56 (Dec. 18) 1886.
13. Almquist, E.: Pemphigus Neonatorum, bacteriologisch und epidemiologisch beleuchtet, Ztschr. f. Hyg. **10**: 253-266, 1891.
14. Sabouraud, Raymond: Étude clinique et bactériologique de l'impétigo, Ann. de dermat. et syph. **1**: 62-90 (Jan.), 320-374 (March), 427-508 (April) 1900.
15. Matzenauer, R.: Zur Frage der Identität des Pemphigus neonatorum und der Impetigo Contagiosa, Wien. klin. Wchnschr. **13**: 1077-1084 (Nov. 22) 1900.
16. Belding, D. L.: Notes on the Etiology and Epidemiology of Impetigo Contagiosa Neonatorum, Am. J. Obst. & Gynec. **11**: 70-79 (Jan.) 1926.
17. Falls, F. H.: Pathogenesis of Pemphigus Neonatorum, Am. J. Obst. & Gynec. **13**: 774-778 (June) 1927.

disease. This is the grave form of the disease, which caused the two deaths in our epidemics. When bullae characterize the infection, it is most properly described as pemphigus neonatorum, a condition that has been variously called bullous impetigo of infants, Ritter's disease, pemphigus contagiosus and impetigo contagiosa bullosa. Reed [11] has suggested the name pyodermatitis contagiosa neonatorum as a term including all forms of the disease. To us, impetigo contagiosa neonatorum seems the preferable term since it adequately describes the usual form of the disease from which the more serious forms may develop.

It is an acute, highly contagious, inflammatory skin disease of the new-born, occurring usually between the fourth and the fourteenth day of life, rarely seen later than four weeks after birth, characterized by the appearance of discrete, superficial vesicles containing a clear fluid, which rapidly becomes opalescent and may become purulent; the vesicles are usually multiple, varying in diameter from one to several centimeters, and, while they have a predilection for certain regions, they may appear on any portion of the body; they rupture spontaneously in a few hours, exposing the moist, reddened dermis, which gradually heals over, usually with a thin crust formation and without scarring.



Epidemics of impetigo contagiosa neonatorum occurring in the obstetric department of Ancker Hospital, St. Paul, from March, 1929, to October, 1930, inclusive. Solid black areas show the time of occurrence and the number of new cases; cross-hatched areas indicate the number of cases in the hospital at any given time.

SOURCES OF INFECTION

Accepting the conclusion of Falls that the disease may have its origin in common staphylococcic skin infections, the avenues of infection become appallingly numerous.

The physician, as Reed [11] states, is at times undoubtedly a carrier: "The unclean obstetrician, the gynecologist whose hands are daily plunged in suppurative pelvic organs, the general practitioner who is compelled to attend illnesses that are openly or only possibly septic, cannot exonerate themselves from guilt if they take on obstetric work or enter the nursery or handle the babies without the most elaborate antiseptic precautions."

Nurses caring for babies may be the source of infection, particularly when they are suffering from pustular acne or furunculosis, from chronic nasal infections, or when they carry infection from a septic hospital patient to the nursery, or from one infected baby to another. Night nurses assigned to varied duties on the obstetric floor, and relief nurses, not infrequently carry contagion to the nursery.

Mothers who have localized staphylococcic infections or who have children at home with impetigo may infect their babies and become the source of an epidemic. Mellon, Caldwell and Winans [18] traced four out of six outbreaks of impetigo which they observed in nurseries to staphylococci in mothers' milk. They also obtained positive cultures from breast milk in 30 per cent of a group of puerperal women without associated mastitis and were of the opinion that breast milk could not be excluded as a probable source of infection.

Visitors are liable to be carriers, particularly children of school age who are constantly exposed to impetigo contagiosa.

An infected baby, either before or after signs of the disease have been discovered, may infect its mother, a nurse or another baby and thus spread the disease. Babies with congenital lesions cannot be excluded as sources of infection. Labhardt and Wallart [19] reported sixteen cases of congenital pemphigus or impetigo. Reed [11] added eleven cases to the literature. During the past few months one of us (J. J. S.) has seen three babies with single lesions present at birth. A recent epidemic in a St. Paul hospital was believed to start from a congenital case.[20]

Nursery paraphernalia and supplies may harbor specific bacteria, and in the past they have been the first

18. Mellon, R. R.; Caldwell, D., and Winans, W. W.: The Mother's Milk as a Source of Infection in Epidemic Pemphigus Neonatorum (Impetigo Contagiosa Bullosa), Am. J. M. Sc. **169**: 419-429 (March) 1925.

19. Labhardt, A., and Wallart, J.: Ueber Pemphigus neonatorum simplex congenitus, Ztschr. f. Geburtsh. u. Gynäk. **61**: 600-613, 1908.

20. Freeman, C. D.: Personal communication to the authors.

suspected source of new cases during epidemics. Schultheiss [21] traced an epidemic to "clean" hospital linen handled by a hospital linen sorter suffering from a suppurating paronychia.

CONTRIBUTING ETIOLOGIC FACTORS

Although impetigo of the new-born is primarily a hospital disease, striking indiscriminately nurseries in strictly regulated maternity hospitals as often as general hospitals in which obstetric patients are not separated from medical and surgical patients, Krigbaum [22] has also noted cases in private homes when epidemics were occurring in the hospitals of certain cities. It is more prevalent in tropical than in temperate climates. Clegg and Wherry [6] stated that almost every white baby born in the Civil Hospital of Manila developed impetigo. They further observed that native babies were rarely affected. Neff [23] recently noted that in the Negro division of the Kansas City General Hospital, where there were approximately 300 births yearly, impetigo had not occurred in two and one-half years. Nursery epidemics are said to begin more often in summer than in winter. This has not, however, been our experience at Ancker Hospital, as shown in the accompanying chart.

We believe that conditions favoring excessive warmth and moisture of babies' skins, such as overheated nurseries, excessive clothing or coverings, and infrequently changed diapers, are important contributing factors in the production of the disease and the continuance of epidemics. Furthermore, energetic bathing irritates the sensitive skins of babies and favors the development of impetigo. We have noted that the commonest sites of lesions in the order of their greatest frequency are the occipital and postauricular regions of the scalp, the folds of the neck, the axillae, the lower abdomen and groins, and the areas around the fingernails. These are all regions particularly exposed to moisture and maceration or subject to irritation of the skin.

CLINICAL COURSE

Mild cases, which constitute the greatest number of cases seen, are self-limited infections lasting about three weeks. The primary lesion is usually followed by several others developing at intervals of from one to three days. The infection is essentially a local one unaccompanied by constitutional symptoms, except in the rarer epidemics or the occasional cases when staphylococci of great virulence produce the extensive and confluent lesions of an acute exfoliating dermatitis. It is the latter form of the disease with its overwhelming toxemia which accounts for the mortality figures of some epidemics varying from 20 to 50 per cent. Reed [11] estimates the morbidity in general as 30 per cent of all babies exposed. Keho [24] believes that 20 per cent of new-born infants have an immunity to the disease.

REPORT OF EPIDEMICS

During the years 1929 and 1930, four epidemics of impetigo contagiosa neonatorum occurred in the new-born nursery at Ancker Hospital. The first epidemic began on March 6, 1929. The initial case occurred in a baby delivered by a physician not on the regular staff of the hospital. Three days after delivery, vesicles were noted on the neck. They varied in size from pinhead to split pea, on a noninflammatory base, and contained a clear, colorless fluid. The baby was isolated, the lesions were opened and a solution of potassium permanganate (1:600) was applied. The lesions increased rapidly in size and spread over the entire body during a period of three days. Many of them ruptured spontaneously, leaving raw, weeping surfaces. The baby's temperature rose to 102.3 F. and death occurred on the fourth day of the illness. During the next few days, similar vesicles appeared on several babies, but in no case did the lesions become as large or as generalized in their distribution. The following measures were adopted in an effort to control the epidemic:

1. Isolation. All infants in the new-born nursery were considered to be exposed to the disease. They were examined at least twice daily and, on the detection of suspicious lesions, a baby was immediately transferred to a second nursery designated as the "infected" nursery. A third or "clean" nursery was established for all babies born after the onset of the epidemic. Each of these nurseries was under the care of a separate corps of nurses. Only persons directly concerned in the care of the babies were allowed in the various nurseries.
2. Visiting on the obstetric floor was restricted to the husbands and the mothers of puerperal patients.
3. All attendants were examined daily for skin infections.
4. Mothers were carefully examined for skin infections and mastitis.
5. All nursery linen was sterilized before use.
6. Numerous methods of treatment were used in active cases. The commonest method was to open the lesions on detection, to swab the base of each lesion with a 10 per cent solution of silver nitrate and then apply a 2 per cent ammoniated mercury ointment. This method was supplanted in some cases by the application of a solution of equal parts of tincture of iodine and spirit of camphor, and in others by the application of solutions of gentian violet, mercurochrome-220 soluble, potassium permanganate or boric acid. The course of the disease showed little or no variation under the different treatments.

The epidemic lasted about six weeks. Not until the general nursery had been thoroughly cleaned, the walls washed and painted and the equipment washed, painted or actually sterilized, were new-born infants again admitted to it.

No new cases developed for a period of about five weeks, but on June 29, 1929, another case was found in the nursery, as shown in the chart. Although it was isolated immediately, within seven days there were sixteen additional cases. The procedures adopted during the second epidemic were the same as in the first. This time the disease was of a less virulent nature. The lesions were seldom more than 1 cm. in diameter. The vesicular stage was so short that lesions were usually identified as pustules. The infants showed little or no constitutional reaction. Those kept under observation for the full course of the disease were free from lesions after from four to ten days. Recurrences were noted in a few cases. The treatment of active cases was as varied as in the preceding epidemic. No further cases developed after the seventh day of the epidemic. All cases on the floor had been discharged two weeks after the onset.

During the following three months, the disease was endemic in character and there were ten scattered cases. Although there were never more than two cases on the floor at one time, only once, for a period of three weeks, was the nursery completely free from impetigo.

Oct. 11, 1929, seven new cases developed within a period of five days and it became apparent that a third

21. Schultheiss, H.: Ueber eine Pemphigusepidemie, Schweiz. med. Wchnschr. **53**: 171-173 (Feb. 15) 1923.
22. Krigbaum, R. E.: On a Possible Cause for Pemphigus Neonatorum: A Preliminary Report, Am. J. Obst. & Gynec. **11**: 494-496 (April) 1926.
23. Neff, F. C.: Epidemic Pemphigus of Newly Born, Arch. Pediat. **46**: 24-33 (Jan.) 1929.
24. Keho, J. A.: Epidemic Pemphigus Neonatorum (Impetigo?), Northwest Med. **28**: 37 (Jan.) 1929.

epidemic had started. The same procedures were instituted as in the preceding epidemic. In addition, the mothers of infected babies were isolated. Despite these precautions, new cases were repeatedly found in the "clean" nursery as well as in the "exposed" nursery. The practice of complete isolation of active cases was then instituted, both mothers and babies being transferred to the contagious division of the hospital as soon as the diagnosis was made. A thorough investigation of technic and procedures was then made. The only change instituted was in the cleansing of the babies immediately after birth. The procedure had been to remove vernix caseosa with warm olive oil and to bathe babies with warm water, using very little soap. The olive oil was replaced with a mixture of equal parts of glycerin and water as proposed by Kellert.[25] This procedure was used for about six weeks, when it was abandoned and the use of less irritating olive oil was resumed. In the latter part of December, 1929, two months after the onset of this epidemic, a strict contagious nursing technic was adopted on the obstetric floor. Gowns were worn by all attendants and hands were scrubbed after visiting the nursery or the mothers of exposed babies. The practice of transferring infected babies and their mothers to the contagious division was continued. After about six weeks of this regimen, no new cases developed for two weeks, and it was possible to return to a single nursery system. Fifty-nine cases had developed during this epidemic and it had lasted five months. The lesions of the disease during this epidemic were similar to those of the preceding one. One death occurred during the early part of the epidemic. In the fatal case, vesicles were noted on the fifth day of life. They did not respond to treatment, they spread rapidly, and death occurred eight days after the onset. Autopsy revealed evidences of birth trauma although there had been no clinical signs of cerebral injury. During the following five and a half months, only three mild cases were discovered in the nursery.

After this long period of freedom from infections, we were surprised to have ten cases develop between Aug. 15 and 20, 1930, as indicated in the chart. The lesions were of the same character as in the two preceding epidemics. The previously adopted methods of control were again instituted, but after another investigation of the whole problem the routine, which will be described under treatment, was finally adopted. This, the fourth epidemic within eighteen months, lasted seven weeks. Since then there have been a few mild, sporadic cases. When they have been discovered, the infected babies and their mothers have been immediately transferred to the contagious division, where they have been under the care of attending physicians and interns other than those on the obstetric service.

TREATMENT

A consideration of treatment divides itself into three phases: (1) prevention, (2) control of an epidemic, and (3) treatment of active cases.

Prevention.—Prevention of impetigo in nurseries is a problem of institutional management, and, as Olmsted[26] has emphasized, should be directed toward preventing the initial case.

In the first place, as Neff[23] has urged, there should be strictly centralized supervision of the obstetric department and nursery by a member of the medical staff, preferably by an experienced resident physician who will pay as particular attention to the prophylaxis of house infections as is paid to the prevention of cross-infections in a well managed hospital for contagious diseases.

Secondly, the nursery should be in charge of a graduate nurse who is thoroughly familiar with contagious nursing technic. She should have adequate nursery help. Her staff should have had contagious disease or operating room training before being sent to the nursery for the new-born. She will teach them to watch every mother and baby for suspicious skin lesions. She will not allow relief nurses to be sent from obstetric wards in which their duties, as Dickey[27] expresses it, have included "hand-soiling with potentially infected material in the giving of perineal care and enemas, and in the handling of dressings."

Thirdly, a nursery technic which avoids undue irritation and excessive warmth and moisture of babies' skins should be adopted. Krigbaum[22] believes that irritation of the skin may occur in the delivery room from the use of solutions made from liquor cresolis compositus containing large quantities of free alkali. Such solutions may be as irritating as ordinary washing or scrubbing powders and should be avoided. To avoid skin irritation in the nursery, the use of soap and water has been curtailed at Ancker Hospital. In the first care of new-born infants, sterile, light liquid petrolatum containing 1 per cent copper oleate, as suggested by Keho,[24] is used to remove vernix caseosa, and to anoint the entire body. Only the scalp is washed, warm water and a small amount of liquid soap being applied with cotton pledgets instead of wash cloths. In the subsequent care of babies, a bath is given every other day, very little soap being used and the skin being dried carefully by patting, not rubbing. After the bath, the entire body is heavily coated with a dusting powder containing mercurous chloride, three parts, talcum, two parts, and zinc oxide, one part, after the formula of Rood Taylor,[28] who has recently reported satisfactory prophylaxis by its use. On alternate days, babies are examined for skin lesions, the buttocks are cleansed with sterile oil, and the dusting powder is again applied. An esthetic objection to the use of the powder is that it stains the babies' clothes gray. Also, a few drooling babies develop a mild dermatitis of the chin, which subsides when talcum is substituted for the dusting powder. Excessive warmth and moisture of the skin are avoided by dressing babies only in abdominal bands, diapers and cotton shirts; by guarding the nursery against excessive temperatures, and by inspecting and changing diapers often. While in the nursery, babies are covered with light cotton blankets; when taken to breast, they are wrapped in woolen blankets.

When it is practical in older hospitals and in the building of new hospitals, Rulison's[29] plan of small nurseries with individual baby units and a revised scheme of nursing whereby nurses are responsible for the care of a limited number of mothers and their babies is well worthy of consideration.

Epidemic Control.—When, in spite of all precautions, a case of impetigo is discovered in the nursery, active measures should be taken promptly. The baby should be removed from the nursery and isolated. The mother

25. Kellert, E.: On the Control of Epidemic Impetigo Neonatorum by Means of Glycerin, Am. J. Obst. & Gynec. **18**: 426-427 (Sept.) 1929.
26. Olmsted, H. C.: Impetigo Contagiosa Neonatorum, A Present Day Hospital Nursery Problem, Northwest Med. **29**: 166-169 (April) 1930.
27. Dickey, L. B.: A Study of an Epidemic of Impetigo in New-Born Infants, Arch. Pediat. **43**: 145-159 (March) 1926.
28. Taylor, Rood: The Prevention of Pemphigus Neonatorum in Hospitals, Tr. Am. Pediat. Soc. **41**: 23 (May 20, 21, 22) 1929; Am. J. Dis. Child. **38**: 437-438 (Aug.) 1929.
29. Rulison, E. T.: Control of Impetigo Neonatorum, J. A. M. A. **93**: 903-904 (Sept. 21) 1929.

should be isolated and carefully examined for skin eruptions and mastitis. A thorough search should be made for carriers, and individuals with suspicious skin lesions should be excluded from contact with babies and nursery linen. If further cases develop, a "three nursery system" with a separate nursing personnel for each nursery should be established. The first nursery should be the original one, known as the "exposed" nursery, in which cases were first discovered. The second nursery, known as the "infected" nursery, should care for infected cases that have been removed from the first. We believe that in a hospital with a contagious division an epidemic can be more quickly controlled if all babies with active lesions and their mothers are immediately transferred to that division. The third nursery, known as the "clean" nursery, should receive all babies born after the epidemic was discovered. The original nursery should not be used again for new-born infants until the last baby has been discharged and the nursery cleaned, as after the occurrence of any contagious disease. Even then it should be manned by a new nursing corps.

Treatment of Active Cases.—The direct treatment of frank cases should be simple in character. Our experience indicates that a "dry treatment" is best. Ointments, which are effective in adults and children, are useless on the delicate skins of new-born infants and seem to favor extension. Cole and Ruh [9] came to that conclusion sixteen years ago, but a review of the literature since then indicates that their observations have been largely disregarded.

Our plan of treatment is to open each vesicle with a cotton applicator dipped in alcohol and to swab the base of the lesion with a 5 per cent solution of silver nitrate. Taylor's dusting powder is then applied freely to the whole body as in prophylaxis, and subsequent new lesions are treated in the same way.

CONCLUSIONS

1. Impetigo contagiosa neonatorum in nurseries for the new-born has become a serious problem of the modern hospital.

2. It is practically impossible to prevent the occurrence of sporadic cases of the disease in these nurseries.

3. Constant vigilance for the detection of pyogenic infections in attendants and patients and a nursery technic discouraging the development of pyodermic infections in new-born infants is the price that must be paid for the prevention of epidemics of the disease.

4. Epidemics are best controlled by a three nursery system which segregates infected babies, exposed babies and unexposed babies from one another.

5. A "dry treatment" of active cases of the disease is preferable to the use of ointments.

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Functions of the Spleen.—Contraction is the first and perhaps the most important function of the organ. . . . Gray (1854) believed the organ had a more passive rôle as a safety-valve for the portal blood, since his experiments, of which many were done on spleens freshly removed from the animal body, did not prove to him any active contraction. Roy (1881) was really the first physiologist specifically to investigate the rhythmic movements and contractility of the spleen during life, and his work was continued by Schäfer and Moore (1896). The results of the latter authors showed that the power of contraction of the spleen is inherent in it, and may occur quite independently of the nervous system.—McNee, J. W.: The Spleen: Its Structure, Functions, and Diseases, *Lancet* **1**:1009 (May 9) 1931.

FURTHER EXPERIENCES WITH NUPERCAINE

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A preliminary report on nupercaine was made by us [1] in February, 1930, based on a review of the literature available and on four months' use of the drug. This supplemental report is based on our further personal experience and on the hundred odd papers that have appeared since Miescher synthesized it from the quinoline nucleus.

Various pharmacologic studies have demonstrated the high absolute toxicity of nupercaine in animals, and, as pointed out in our preliminary report, when reasonable doses have been exceeded, largely through gross carelessness, a similar toxic action has been demonstrated in human beings. This toxicity is compensated for by the unusual anesthetic efficiency of the compound. From experiments on guinea-pigs and rabbits, Uhlmann [2] concluded that nupercaine was five times more toxic than cocaine, intimating that such a ratio between the two drugs should exist in their clinical use. The incorrectness of such an assumption has been well shown in subsequent investigations. Thus, Lipschitz and Laubender [3] find that when nupercaine and cocaine are injected intravenously into rabbits, the fatal dose of the former is only twice that of the latter. When solutions of nupercaine and cocaine are injected subcutaneously into dogs it would seem, according to Bond and Bloom,[4] that the toxicity of the two substances is practically the same. Gessner and Nauheimer,[5] comparing the toxicity of nupercaine and procaine, find that the former is fifty times more toxic than the latter for guinea-pigs but seven or eight times more toxic for rats. It is apparent, therefore, that only by extensive clinical trial can one arrive at any satisfactory conclusion as to the relative safety of nupercaine and of other local anesthetics when used on human beings. Bond and Bloom [4] find that in dogs absorption from the nasal cavity takes place rapidly but from the vagina and bladder poorly. They also, contrary to previous reports, find that elimination or detoxication takes place rapidly; for when sublethal doses were given intravenously to dogs or cats at ten minute intervals, several times the minimal fatal dose was tolerated. They believe that nupercaine is probably destroyed in the liver but fail to prove it.

Intracisternal injections of 0.1 mg. per kilogram were given three dogs that survived, but 0.15 and 0.2 mg. per kilogram caused death. Respiration continued some time after the cessation of heart action. Respiration in all cases was labored.

So far as we have been able to ascertain, three deaths have been reported in addition to the eight in our preliminary communication:

1. A man, aged 50, in very poor physical condition, was operated on for ulcer of the duodenum, 150 cc. of 1:1,000 solution of nupercaine being introduced into the peritoneal cavity after the abdomen had been opened under procaine

1. Keyes, E. L., and McLellan, A. M.: Am. J. Surg. **9**:1 (July) 1930.
2. Uhlmann, F.: Narkose u. Anaesth. **2**:168 (June 1) 1929.
3. Lipschitz, Werner; and Laubender, Walther: Klin. Wchnschr. **9**:968 (May 24) 1930, p. 74.
4. Bond and Bloom: Personal communication to the authors; to be published.
5. Gessner, O., and Nauheimer, J.: Schmerz, Narkose, Anaesth. **3**:44 (May) 1930.

anesthesia. The Finsterer operation was carried out in forty-five minutes. The patient was in a stuporous condition. Death took place in forty hours. Autopsy revealed nothing unusual. The author [6] suggests that death was due to shock or to nupercaine intoxication.

2. A woman, aged 50, with a large multilocular ovarian cyst extending to the costal margin, was given spinal anesthesia, 15 cc. of 1:1,500 solution being injected between the first and second lumbar vertebrae. The patient was immediately turned to the prone position. Death took place in three minutes. The author [7] attributes death to the wrong technic, in that he placed a patient with a large intra-abdominal mass in the prone position, causing too much respiratory and cardiac embarrassment as the result of intra-abdominal pressure on the diaphragm.

3. A man, aged 60, with diffuse peritonitis, was given a spinal anesthesia, 1.4 cc. of a 1 per cent solution of nupercaine (14 mg.) being used. The patient died during the operation.[8]

The following unpublished fatalities in connection with the use of nupercaine have been brought to our notice:

1. A woman, aged 61, apparently in fair physical condition. was given a spinal anesthesia, 2 cc. of 1:200 solution being injected between the twelfth thoracic and first lumbar vertebrae. Within a few minutes after the patient was placed in the Trendelenburg position, respirations ceased and resuscitation failed. Autopsy failed to account for the death.

2. A man, aged 44, whose condition was critical prior to operation for gangrenous gallbladder with stone, was given a spinal anesthesia with 2 cc. of 1:200 solution. The abdomen was opened and, while the stones were being removed from the gallbladder, the patient complained of difficult respiration, became cyanotic and ceased to breathe. Resuscitation failed. There was a past history of anginal attacks. There was no autopsy.

3. A young man suffering from bronchitis was given a spinal anesthesia with nupercaine for an intra-abdominal operation. The condition during operation and six hours later was satisfactory. After this lapse of time he became irrational and showed a rise of temperature reaching 109 F. before death. Autopsy failed to show the cause for death.

4. Owing to gross negligence, 20 cc. of a 2 per cent solution was infiltrated for tonsillectomy. Death occurred in a few minutes.

5. At least one other death has occurred in this country in which the total amount of the drug employed has not been satisfactorily established.

Toxic manifestations with recoveries have been reported by several:

1. Fränkel [9] reported that in a hemorrhoidectomy in which 80 cc. of a 1:570 solution was employed, dizziness, oppression and roaring in the ears occurred; vomiting then followed. The toxic symptoms subsided in thirty minutes.

2. Vejdovsky,[10] in employing infiltration in 318 cases, had 8 cases of vomiting. After large doses of the drug were given marked pallor and headache were observed. He does not consider such symptoms alarming.

3. Hofhauser,[11] in employing infiltration in 300 cases, had 1 case of intoxication. A man, aged 47, poorly developed and undernourished, underwent an operation for bilateral struma, 100 cc. of a 1:1,000 solution of the drug being used with 12 drops of an epinephrine preparation. Several hours later convulsive movements of the arm occurred, recurred mildly during the next two days, and disappeared.

4. Feuz [12] reports three cases of intoxication: (*a*) A man, aged 66, was given 17 cc. of a 1:1,000 solution, plus a surface application of 10 per cent cocaine, in the mouth. (*b*) A man, aged 27, was unconscious and had convulsions following the administration of 90 cc. of a 1:1,000 solution. (*c*) A woman, aged 19, was unconscious and had convulsions following thyroidectomy in which 100 cc. of a 1:1,000 solution was used.

No serious unfavorable reactions have been reported following topical application except when the most gross carelessness in the use of the drug has been shown; e. g., forcing an unknown amount of a 1 per cent solution into the bladder.

Tissue necrosis following infiltration has been reported by Brandesky,[13] two cases, and Stohr,[14] four cases. Subsequent writers suggest that skin necrosis following the use of nupercaine would be more properly attributed to epinephrine or infection.

Reports on infiltration anesthesia with nupercaine show that a 1:1,000 solution is generally preferred to a 1:2,000 solution. In our previous paper we quoted Christ's [15] figures for safe maximum doses; viz., 400 cc. of a 1:2,000, 150 cc. of a 1:1,000 and 50 cc. of a 1:500 solution.

Others have advised a lower limit of dosage. We have noted no poisonous effects whatever (excepting those cited hereafter as a result of spinal anesthesia, concerning the toxic origin of which we are not convinced). Yet from the experience of others we conclude that the maximum therapeutic dose may well be not far from 100 cc. of a 1:1,000 solution by infiltration, 30 cc. of 1:500 for caudal and 2 cc. of 1:200 for intraspinal injection.

In this connection it is to be noted that, if further experience shows that detoxication is as rapid as it would seem, it may prove practicable to take advantage of the prolonged anesthesia and, by giving the initial dose half an hour before operation is begun, be in a position to stretch the dosage of infiltration anesthesia in a second dose if necessary.

It is further to be noted that the combination of procaine and nupercaine has been employed without accident—as a rule by surgeons impatient with the slow anesthetization resulting from nupercaine. We once followed an unsuccessful attempt at spinal anesthesia with the usual dose of nupercaine by a successful procaine spinal anesthesia. In this instance we believe that the failure of nupercaine anesthesia was due to injection of the drug outside the meninges. It has been stated that nupercaine affects the motor nerves more than the sensory when used in spinal anesthesia. Such has not been our observation. One patient had complete anesthesia below the belt with considerable motor function of his legs, but no attempt was made to set him on his feet. It has also been stated that headache follows spinal anesthesia by nupercaine more commonly or more severely than after procaine. This is surely not the case. Headaches with us are as rare after nupercaine as after procaine. Their low incidence we ascribe to the fact that the condition of most of our patients necessitates their remaining in bed for at least a few days after operation. The headache seems to be due to mechanical causes and to be quite independent of the drug employed.

6. Mandl, F.: Zentralbl. f. Chir. **57**: 2966 (Nov. 29) 1930; Wien. klin. Wchnschr. **42**: 1393 (Oct. 24) 1929.
7. Jones, W. H.: Lancet **2**: 549 (Sept. 6) 1930; Brit. J. Anaesth. **7**: 99, 146 (April) 1930.
8. Steinbrück, M.: Zentralbl. f. Chir. **57**: 273 (Feb. 1) 1930.
9. Fränkel, W. K.: Med. Klin. **25**: 1971 (Dec. 20) 1929.
10. Vejdovsky, O.: Prakticky Lekar **10**: 93 (number 3) 1930.
11. Hofhauser, J.: Orvoskeuzes **19**: 89 (Nov.) 1929.
12. Feuz, J.: Schweiz. med. Wchnschr. **59**: 1160 (Nov. 16) 1929.
13. Brandesky, Walter: Zentralbl. f. Chir. **57**: 132 (Jan. 18) 1930.
14. Stohr, R.: Wien. klin. Wchnschr. **43**: 559 (May) 1930.
15. Christ, A.: Narkose u. Anaesth. **2**: 161 (June 15) 1929.

Delay in anesthesia is noted by Rom DeCock [16] and by Usadel and Stör,[17] who therefore employ a mixture of procaine and nupercaine. Local vascular dilatation (physiologists note slight dilatation of the blood vessels followed by constriction in about eight minutes) has been of no inconvenience to some, but others add epinephrine to counteract this phenomenon.

Sacral anesthesia has been satisfactory in the hands of Heckenbach,[18] who uses 30 cc. of a 1:500 solution. But Läwen [19] is dissatisfied with a 1:1,000 solution (unstated amount).

Surface anesthesia has been uniformly good in the hands of urologists and laryngologists. In nose and throat work, Rosenstein [20] uses 2 per cent for topical application. Ruedi [21] uses 2 per cent for bronchoscopy and esophagoscopy. Della Vedova [22] uses 2 per cent and finds it better than 10 per cent cocaine but of slower action. Birkholz [23] uses 2 per cent, finding it equal to 5 per cent cocaine. Albesheim [24] has used from 1.5 to 3 per cent but finds 2 per cent best and has employed it in 300 cases without reactions.

For urethral anesthesia Walker [25] found a 1:400 solution unnecessarily strong and now uses a 1:750 solution but thinks cocaine is probably better. Fränkel, for cystoscopic examinations, uses from 150 to 200 cc. of a 1:2,000 or 1:1,000 solution. Heckenbach uses a 1:1,000 solution to which from 10 to 15 drops of epinephrine is added to each 100 cc. Widenhorn [26] has used a 1:250 to 1:750 solution. Jaeggy [27] uses a 1:500 solution.

Quarella [28] reported a series of 60 cases of spinal anesthesia with nupercaine; later he reported 400 additional cases. He recommends that a dosage of more than 10 mg. should not be exceeded. At first he employed a 1 per cent solution; later 0.5 per cent, to which a small amount of dilute hydrochloric acid was added. Jones turns the patient to the prone position hoping to get anesthesia of the dorsal roots. Jastram [29] in twelve cases used a 1 per cent solution, from 0.75 to 1 cc. Steinbrück in twelve cases used from 0.75 to 1 cc. He had a case of collapse following 1.4 cc. and a death following 1.5 cc. (quoted previously). Iwata [30] obtained anesthesia for twenty abdominal operations with from 4 to 5 cc. of a 1:1,000 solution. One patient required ether. He was satisfied.

Dilute solutions on compresses have relieved the pain due to burns.

PERSONAL OBSERVATIONS

Spinal anesthesia by nupercaine has been employed by us 215 times on 159 patients; one intraspinal injection was given to each of 110 patients, two to 44, three to 3 and four to 2 patients.

The operations that were performed are given in table 1. In addition, injections were made for the relief of renal colic in four cases.

The ages are given in table 2.

The youngest was 16 years of age; the eldest, 81.

16. De Cock, Rom: Vlaamsch Geneesk. Tijdschr. **2**: 777 (Oct. 4) 1930.
17. Usadel and Stör: Der Chirurg. **2**: 777 (Sept. 1) 1930.
18. Heckenbach, W.: Ztschr. f. urol. Chir. **28**: 295, 1929.
19. Läwen: Fortschr. d. Lekar **10**: 93 (number 3) 1930.
20. Rosenstein, Siegfried: Deutsche med. Wchnschr. **55**: 2010 (Nov. 29) 1929.
21. Ruedi, L.: Schweiz. med. Wchnschr. **60**: 64 (Jan. 18) 1930.
22. Della Vedova, Ansano: Gazz. d. osp. **51**: 189 (Feb. 9), 1930.
23. Birkholz: Klin. Wchnschr. **9**: 72 (Jan. 11) 1930.
24. Albesheim, L.: Folia otolaryng. **19**: 242 (March) 1930.
25. Walker, K.: Brit. J. Urol. **2**: 129 (June) 1930.
26. Widenhorn, Hans: Arch. f. klin. Chir. **159**: 816, 1930.
27. Jaeggy, E.: Extrait du Journal belge d'urologie, October, 1929, number 5.
28. Quarella, B.: Minerva med. **2**: 921 (Dec. 8) 1929; **2**: 325 (Sept.) 1930.
29. Jastram: Zentralbl. f. Chir. **57**: 218 (Jan. 25) 1930.
30. Iwata, S.: Nihon Fujinka Gakkai Zasski, August, 1930, number 8, 61.

During the past year a uniform technic has been followed. The dose of the drug has been 2 cc. of a 1:200 solution in ampules as supplied by the manufacturers.

A preliminary hypnotic, ¼ grain (16 mg.) of morphine and 1/200 grain (0.3 mg.) of scopolamine, is given subcutaneously one-half hour before the patient is sent to the operating room. The blood pressure is taken before the intraspinal injection is made and every five minutes thereafter during the operation, with a final reading at the time that the patient is returned to the bed, the foot of which is kept elevated for at least three hours.

Needles and syringes are sterilized by steam heat and put in 60 per cent alcohol. The spinal needle is always well flushed with alcohol before it is used to remove any tiny particles that might have escaped the cleaners.

The spinal needle employed is gage 20, 3½ inches in length with a 45 degree bevel.

A subcutaneous injection of ephedrine hydrochloride, 50 mg., is given subcutaneously just before the anesthetic is injected.

The injection is made between the third and fourth lumbar vertebrae with the patient in the sitting position, unless prevented by a disability.

The greatest care is always used in puncturing the dura. With the characteristic click as this is pierced, spinal fluid generally flows, but, should it not, a 2 cc. syringe is attached and gentle aspiration applied before further manipulation of the needle is attempted.

TABLE 1.—*Various Operations*

Nephrectomy for:	
Pyonephrosis	5
Tuberculosis	3
Rupture	1
Heminephrectomy	1
Stone	7
Nephrotomy for:	
Stone	2
Pyelotomy for:	
Stone	10
Stricture at ureteropelvic junction	1
Exploration of loin	2
Nephropexy	2
Perinephric abscess	3
Ureterotomy for stone:	
At upper third	2
At lower third	2
Ureterectomy for urinary fistulas	3
Prostatectomy	51
Prevesical section	18
Cystostomy	33
Excision of suprapubic fistulas	4
Implantation of radon seeds into tumor of bladder	14
Excision of ulcer	4
For:	
Periurethral gangrene	1
Excision of perineal fistulas	3
Drainage of prostatic abscess	1
Implantation of radon seeds into carcinoma of prostate	1
Urethral caruncle	2
Bilateral hydrocele	3
Prostatic punch (Caulk cautery)	11
Internal urethrotomy	5
Litholapaxy	6
Cystoscopic fulguration of tumors or ulcers of bladder	10

TABLE 2.—*Ages*

Ages	Number of Cases
Below 20 years	3
20 to 30 years	20
30 to 40 years	20
40 to 50 years	23
50 to 60 years	41
60 to 70 years	65
70 to 80 years	41
80 to 90 years	2

Three or four cubic centimeters of spinal fluid is removed for routine examination.

The height of the anesthesia depends on the amount of spinal fluid that is withdrawn and reinjected. For operations on the perineum, the drug is simply injected into the spinal canal; below the umbilicus, 3 cc. is aspirated into the syringe containing the 2 cc. of the nupercaine solution, making a total of 5 cc. to be injected; for kidney anesthesia 8 cc. of spinal fluid is aspirated into the syringe containing 2 cc. of the drug, making a total of 10 cc. to be injected.

All injections and aspirations are done very slowly. Actual aspiration may not be necessary as the normal intradural pressure is often sufficient to force the spinal fluid fast enough into the syringe. As each third of the total is injected, release of pressure on the plunger, to make sure of a return flow, assures one that the point of the needle is in the proper place. This minimizes failures.

At the completion of the injection, the patient is immediately placed in the Trendelenburg position with the head just below the hips. With a 25 per cent fall in blood pressure the Trendelenburg position is increased and further fall may be controlled by stimulants, 25 mg. of ephedrine hydrochloride or 5 minims (0.3 cc.) of epinephrine. We are using this stimulant less and less.

We have never seen anesthesia of the whole body. Three patients given anesthesia for operations of the kidney had anesthesia to the clavicles.

The same dose (2 cc. of a 1:200 solution of nupercaine) was employed in a 16 year old boy in shock, a woman, acutely ill, weighing 102 pounds (46.3 Kg.), and a man weighing 240 pounds (108.8 Kg.) in excellent health, all for operations of the kidney. A few whiffs of ether were given the boy as he moaned from nervous exhaustion. The woman required a difficult nephrectomy which took two hours and twenty minutes, during the last twenty minutes of which she was nervously exhausted, and a few whiffs of ether were given. In the case of the heavy man, the operation was started fifty minutes after the spinal injection, which gave perfect anesthesia.

Shoulder supports have been eliminated. The foot of the table is dropped and the patient's flexed legs are lightly held to it by a strap; i. e., the patient is held by the legs.

Vomiting has occurred on the operating table four times: In one case the blood pressure was higher than before the anesthetic had been given; in the second case it had not changed; in the third case there was a considerable drop, and in the fourth case the patient vomited before coming to the operating room and ceased doing so as soon as the operation was begun.

Successful spinal anesthesia depends on good technic and the nervous stability of the patient. The former is a matter of experience and tactile sensation. The latter depends on the psychologic ability of the individual watching the patient plus a mild preanesthetic narcotization. Apprehensive or nervously exhausted patients are helped by a whiff of aromatic spirits of ammonia or of ether.

Additional anesthesia has been necessary for pain in sixteen cases: local nupercaine in the upper angle for a kidney incision in one case; ether or gas and oxygen in thirteen cases; a second intraspinal injection of nupercaine once; an intraspinal injection of procaine once. Ether by the open method was given for nervous exhaustion but no pain to eight patients; six times after semihysterical behavior, once for profanity. One patient was given 7½ grains (5 cc.) of sodium amytal intravenously one hour before the intraspinal injection but awakened in half an hour. The intraspinal anesthesia was given in the usual manner. Midway through the operation the patient suddenly became maniacal and was given ether. The postanesthesia course was uneventful.

Failures are attributed to the operator's technic.

Spinal anesthesia has been refused three highly emotional individuals; a patient with a blood pressure of 230 systolic and 120 diastolic was considered safer under caudal and abdominal block anesthesia. It has not been given when respiratory embarrassment was present.

Local anesthesia was used in preference to spinal anesthesia for cystotomy on patients desperately ill.

No patient was refused a spinal anesthesia on account of low blood pressure.

Only one patient with a known cerebrospinal pathologic condition was given a spinal anesthetic. The lesion, a cerebrospinal syphilis, was discovered by routine examination after the first injection was given. Subsequently two more injections were given.

REPORT OF CASES

CASE 1.—A man, aged 60, with chronic alcoholism and myocarditis, had complete retention of urine owing to an enlarged prostate. He had led a catheter life. Prostatectomy had been advised against. The Wassermann reaction was negative. The reflexes were normal. March 24, 1930, a suprapubic cystotomy for drainage was performed under spinal anesthesia; also a bilateral ligation of the vasa. He did well. Routine examination of the spinal fluid showed 80 lymphocytes per cubic millimeter, increased globulin, a ++++ Wassermann reaction and a tabetic gold curve. May 11, under spinal anesthesia, the prostate was removed suprapubically. This time the spinal fluid showed 90 cells, globulin increased, Wassermann ++++ and a paretic curve. The suprapubic fistula healed poorly and he was in a hurry to go to Europe. So on June 16, under spinal anesthesia, the suprapubic fistula was excised and the bladder closed. The bladder did not leak.

During the first two operations there was no unusual reaction; the blood pressure fell from 140 systolic to 96 in half an hour the first time and to 90 the second time. During the third anesthesia the systolic blood pressure fell to 70 and did not return to 100 for two hours. The patient later stated that the first two injections did not disturb him but the last shocked him badly. In January, 1931, he felt well, urinated with ease, drank discreetly, and refused antisyphilitic treatment. The urine was purulent, the kidney function good. The residual urine approximated 200 cc. He takes methenamine and refuses to irrigate his bladder.

Respiratory paralysis occurred twice after intraspinal injection. One patient recovered, the other died.

CASE 2.—A lean, vigorous woman, aged 61, was treated by us first on Feb. 10, 1930. She had had frequent and painful urination for five years and difficult urination for one year. The bladder had been resected for ulcer with only brief and partial relief. The bladder capacity varied from 25 to 75 cc. Cystoscopy showed no ulcer, 1 ounce of residual urine, mild cystitis and a swelling at the neck of the bladder resembling a small prostatic middle lobe. This and the subsequent cystoscopies were done under caudal nupercaine anesthesia without unpleasant consequences. February 15, a Caulk cautery punch operation was done under spinal anesthesia. Blood pressure fell from 158 systolic and 90 diastolic to 130/70 in twenty-five minutes and ten minutes later was 150/80. November 1, the pain being worse than ever and an ulcer having been discovered in the vault, nupercaine spinal anesthesia was given in the usual manner and without difficulty in the manner described. The blood pressure was 152/84 and in fifteen minutes fell to 124/80 and then at five minute intervals was

read at 145/88, 144/80 and 124/78. At this time, half an hour after anesthetization, she was brought to the operating room by the intern who, while enthusiastically taking the blood pressure, had not noticed that the breathing was growing fainter and fainter (testimony of Sister-in-charge). She was now cyanotic, semiconscious, breathing very slowly and faintly. Artificial respiration of oxygen 90 per cent and carbon dioxide 10 per cent did not help. In three minutes the blood pressure had fallen to 70/30 and two minutes thereafter the pulse was impalpable at the wrist. Breathing had ceased. Intratracheal intermittent insufflation of oxygen and carbon dioxide was then begun with the Flagg resuscitation apparatus. In less than a minute—it seemed almost immediately—the pulse at the wrist was regular and of good quality, the skin no longer cyanotic, voluntary respiration was resumed and the patient was struggling to get the tube out. It was therefore removed, whereupon the cyanosis returned and breathing ceased. Some seconds were lost and quite a little force employed to overcome the spasm of the vocal cords which opposed reinsertion of the tube. During this time the gases were delivered intermittently into the pharynx in the hope that some faint respiratory effort might carry them into the lung. But it was not until the tube was fully inserted that respiration was again resumed. Subcutaneous emphysema was then noted in the right side of the neck and in the upper thorax. The intratracheal respiration was continued for ten minutes. The tube was then withdrawn and normal breathing resumed, at first irregular and chiefly on the right side of the chest. The patient, still unconscious, was left in the Trendelenburg position and wheeled to one side of the operating room while another patient was operated on. Two hours and fifteen minutes after the anesthesia, the patient was partially conscious, the respiration and pulse were normal and the blood pressure was 132 systolic and 80 diastolic. The vault of the bladder was then resected through a suprapubic incision and decompression established through the suprapubic tube.

Convalescence was wholly uneventful. The emphysema subsided in two days; the throat was sore for four days. At the end of three weeks the patient was discharged from the hospital; the bladder was closed, urination painless and the bladder capacity from 125 to 200 cc. Her description of this drama was simply that she became unconscious shortly after the intraspinal injection, was conscious of bright lights during the operation and knew when she was replaced in bed.

The recovery of this patient was unquestionably due to the skilful management of the Flagg apparatus by Dr. Redmond, our house surgeon.

CASE 3.—A man, aged 43, was admitted to the hospital at 3 p. m., June 4, 1930, with a history of painless anuria for three days. Paralysis of the left arm and leg followed infantile paralysis at the age of 18 months. A left nephrectomy had been performed at the age of 12 years for an unknown cause. The roentgenogram showed a large right kidney, which at operation proved to be small. The systolic blood pressure was 110. Chemical examination of the blood revealed nonprotein nitrogen, 99; creatinine, 6.42. There was cyanosis, mild stupor and muscular twitching. The medical opinion was cardiac failure and uremia.

In the faint hope of saving life by draining a dilated kidney pelvis, two hours after the patient's admission, the kidney was explored under spinal anesthesia. The kidney was found to be small, quite adherent, uninflamed, sclerotic and dark gray, evidently a mass of scar. It was not possible to strip the capsule at any point. The systolic blood pressure before injection had been 110, and for each five minute interval 90, 80 and 70. An intravenous infusion of saline solution was started. The peritoneum had been opened during exploration, so 500 cc. of saline solution was poured into the peritoneal cavity. As the solution was put in the patient immediately complained of difficulty in breathing. No blood pressure could be registered. The wound was closed. The patient was unconscious; the veins of the neck were dilated. On a stretcher in the Trendelenburg position the patient was returned to his bed and died by respiratory failure one hour after receiving the spinal anesthetic. There was no autopsy.

This patient's death was hastened by the spinal anesthetic plus the weight of the saline solution on the diaphragm.

A month previously a woman with a single kidney, having had anuria for three days, was operated on in the hospital by another surgeon under gas-oxygen. A perinephric abscess and a destroyed pyonephrotic kidney were found. The patient died in two hours.

A patient died of cardiac failure on the table. Our colleague, who wishes to remain anonymous, permits us to report the case:

CASE 4.—A man, aged 73, was admitted, Nov. 5, 1930, suffering from symptoms due to prostatic retention. Rectal examination revealed an adenomatous prostate.

November 8, cystostomy and bilateral ligation of the vasa were performed under spinal anesthesia (nupercaine 2 cc. of a 1:200 solution). The blood pressure before anesthesia was 155 systolic and 100 diastolic and for each five minute interval thereafter 138/100, 138/88, 120/70, 104/60, 100/58, 100/58, 94/50, 94/50 and 94/50. On return to bed it was 100/54 and that night 120/80; four days later it was 120/80. There were no complications.

November 18, prostatectomy under nupercaine spinal anesthesia was given by the method described. The blood pressure before anesthesia was 120 systolic and 80 diastolic. Fifteen minutes later, when the operation was completed, the systolic pressure was 90 and the pulse was missing every fifth beat. Slight cyanosis was present. The systolic pressure then dropped to 70 when 50 mg. of ephedrine hydrochloride was given subcutaneously. The patient was then in complete collapse and the breathing was shallow; the heart could not be heard with a stethoscope. There was no response to 10 minims (0.6 cc.) of epinephrine or to the Flagg resuscitation apparatus. There was no autopsy.

A patient developed auricular fibrillation immediately following a second spinal anesthesia:

CASE 5.—A man, aged 67, was admitted to the hospital, July 30, 1930, suffering from prostatic retention.

August 1, prevesical section and bilateral ligation of the vasa were performed. Spinal anesthesia was given in the usual manner. The blood pressure before operation was 144 systolic and 62 diastolic, and the following day it was the same. There were no unpleasant incidents or sequelae.

August 5, a spinal anesthesia was given in the usual manner for prostatectomy. The blood pressure before the anesthetic was 124/60. Ten minutes after the injection auricular fibrillation was noted, so the bladder was merely punctured for drainage. He was returned to bed and put on digitalis. The next day the cardiologist discontinued the digitalis. The following day fibrillation again developed and digitalis was resumed. Six days after the second spinal anesthesia the blood pressure was 132/68 and the pulse regular. He was doing well and was more comfortable. The following day, while sitting on the bed pan, he became cyanotic and fell back dead. There was no autopsy.

As noted in our previous communication, the fall of blood pressure under nupercaine spinal anesthesia seems distinctly less than under procaine. Indeed, if the patient is young, the effect of the preliminary administration of ephedrine usually more than counteracts that of the nupercaine and the blood pressure remains at or above the normal. Thus the average curve for ten patients below 30 years of age remained above normal for thirty minutes and then fell but 4 mm. below the initial pressure. In older age groups the average fall reaches its maximum of from 13 to 24 mm. more rapidly, as a rule, than is the case after procaine anesthesia and, unless the operative shock is considerable, begins to rise after thirty minutes.

It is to be noted that though nupercaine produces prolonged anesthesia it depresses the blood pressure no longer than does procaine. Classification of cases according to age, initial blood pressure or general condition results in comparable curves. The healthy young person and the patient with low blood pressure (unless

this is due to shock or to hemorrhage) shows little depression of blood pressure. Constitutionally low blood pressure is not a contraindication to spinal anesthesia.

Caudal anesthesia with nupercaine solution has been employed in the office and in the hospital in more than 250 cases for urethral manipulations and operations on the perineum without a single symptom of intoxication.

We employ two doses to get different degrees of anesthesia:

1. Paresthesia may be obtained with 30 cc. of a 1:1,000 or 20 cc. of a 1:500 solution. This is sufficient for urethral manipulations and rarely causes paralysis of the muscles of the leg.

2. Surgical anesthesia may be obtained with 40 cc. of a 1:1,000 or 30 cc. of a 1:500 solution. This amount gives surgical anesthesia of the perineum and so often affects the hamstring group of muscles that it is not given in the office unless the patient is prepared to stay there two or three hours to allow the paralysis to wear off. The bladder has remained sensitive to distention although it may be incised and burned at will without pain under caudal anesthesia. The solution employed is supplied by the manufacturers in ampules.

The same technic has been employed for the past year. The syringes and needles are boiled for fifteen minutes and then soaked in 60 per cent alcohol. The patient lies in the ventral position. The skin over the buttocks is washed with alcohol and an alcohol-soaked pad is placed over the site of injection while the sterilization of the instruments goes on. A wad of cotton is pushed down toward the anus to prevent the alcohol from running over the genitalia. There has never been an infection.

The sacral cavity is entered through the sacrococcygeal membrane with a gage 23, 1½ inch needle on a 2 cc. syringe. This combination makes a very delicate instrument and greatly increases one's tactile sensation. After the cavity is entered the 2 cc. syringe is replaced by a 10 cc. syringe, with which the injection is given. We feel that the short needle minimizes trauma and lessens the risk of entering the dura and blood vessels. The resulting anesthesia is as satisfactory as when a longer needle is employed.

Caudal anesthesia has been employed therapeutically three times recently:

CASE 6.—A man, aged 64, who had a one stage prostatectomy six days previously, developed bladder spasms due to bleeding which produced a vicious circle. The bladder was emptied of clots three times within an hour and a half under gas and oxygen anesthesia. The spasms were getting worse; the pulse was mounting, and morphine gave no apparent relief. A caudal anesthesia was given (30 cc. of a 1:500 solution of nupercaine). Within five minutes the spasms stopped; the bladder was emptied of clots; he fell asleep and the bleeding ceased. He had no more discomfort until the next day, when there were mild spasms and slight bleeding.

CASE 7.—A man, aged 18, admitted to the hospital Sept. 12, 1930, with a diagnosis of perinephric abscess, was given a spinal anesthetic (2 cc. of a 1:200 solution of nupercaine) for cystoscopy and pyelography. He was then removed to the operating room and the abscess drained under the same anesthesia. Following the operation he had an acute reaction to the cystoscopic examination, urinating every fifteen minutes with great pain and terminal bleeding. A caudal anesthesia (30 cc. of a 1:1,000 solution) gave relief in five minutes and he urinated but twice and without pain in the next six hours. In eight hours he was urinating every thirty minutes with as much pain as before. This procedure was repeated three days later with greater relief.

A patient who was reported in our previous paper as being susceptible to procaine and not to nupercaine has had two more caudal anesthetics without reaction.

Repeated caudal injections have been given without general or local reactions. One patient was given ten injections during the past eighteen months, one of procaine and nine of nupercaine; another sixteen, twelve of procaine and four of nupercaine; and a third, four spinal anesthesias (nupercaine) and five caudal anesthesias during the past ten months.

CASE 8.—A man, aged 40, seen at the office, Aug. 12, 1929, had had two suprapubic cystotomies for implantation of radon and fulguration of papillary carcinoma of the bladder in January, 1928 and 1929. The hematuria had returned.

Aug. 12, 1929, cystoscopic examination was performed under caudal anesthesia (procaine) 30 cc. of a 2 per cent solution being used. There were multiple tumors of the bladder—a big one at the neck of the bladder, multiple little tumors grouped in a crescent transversely across the posterior-superior wall, and scattered minute ones about the bladder, but the trigon was free from tumor. All were well fulgurated. The examination was repeated and fulguration carried out under caudal anesthesia (nupercaine) six times to June, 1930, at which time cystoscopic examination was negative for tumor. The next examination was in September, 1930, under surface anesthesia only, when a minute tumor was burned. He preferred further caudal anesthesia, under which four more examinations have been made, the last being Jan. 23, 1931, when a tumor was burned.

CASE 9.—A man, aged 72, seen at the office, July 20, 1928, with a history of painless hematuria with clots, of eighteen months' duration, was given caudal anesthesia under procaine 2 per cent, 30 cc. being used. A large low malignant tumor was covering the left side of the trigon. The specimen was removed (grade 2); it was well fulgurated.

The anesthesia was repeated, August 1, 15 and 29, for fulguration and, September 13, for the cystoscopic implantation of from 2 to 2.5 millicuries of radon.

November 7, the tumor was as before; it was well fulgurated.

November 28, radon, 2.5 mc., was implanted.

December 5, fulguration was done.

Jan. 2, 1929, fulguration was done.

January 23, radon, 2.5 mc., was implanted.

March 27, fulguration was done.

May 22, fulguration was done.

Jan. 8, 1930, caudal anesthesia was given with 30 cc. of a 1:1,000 solution of nupercaine; fulguration was done.

March 26, caudal anesthesia with nupercaine was given; no tumor was seen.

December 22, caudal anesthesia with nupercaine was given. Bleeding had returned. Fulguration was done.

Jan. 12, 1931, caudal anesthesia with nupercaine was given; only a flat ulcer was found.

CASE 10.—A man, aged 59, seen at the office, Feb. 7, 1930, complaining of frequency and bloody urination with clots of one month's duration, had lost 25 pounds (11.3 Kg.) in weight. Caudal anesthesia was given under nupercaine, 30 cc. of a 1:1,000 solution. The cystoscope showed trabeculation, cystitis, a large middle lobe of the prostate and a sloughing tumor, incrusted, 2 by 2 cm., behind the right ureter.

February 15, under spinal anesthesia, 2 cc. of a 1:200 solution of nupercaine being used, prevesical section and bilateral ligation of the vasa were done.

February 18, spinal anesthesia was given with nupercaine, 2 cc. of a 1:200 solution. Suprapubic implantation of radium into the bladder tumor and prostatectomy were done.

March 15, nothing entered the bladder through the urethra, and the total suprapubic fistulas persisted. Caudal anesthesia failed to allow anything to enter the bladder. Complete stenosis was present.

March 21, spinal anesthesia was given with nupercaine, 2 cc. of a 1:200 solution. With a finger in the suprapubic sinus the neck of the bladder was located only in conjunction with a sound in the urethra. Two large bites were removed by the Caulk cautery punch.

May 16, cystoscopic examination under caudal anesthesia showed that the tumor had returned.

May 20, under spinal anesthesia, 2 cc. of a 1:200 solution of nupercaine, the bladder was opened suprapubically and radium implanted. The bladder was sutured tight. It did not leak and the patient was home on the twelfth postoperative day.

September 19, cystoscopic examination was made under caudal anesthesia. A stenosis of the neck of the bladder was found after the cystoscope failed to enter. It was dilated to F. 30 with a sound. Granulations were found over the original site of the growth.

November 7, cystoscopic examination under caudal anesthesia found a wide open neck of the bladder and an ulcer on the right side of the trigon due to a radium burn.

Infiltration local anesthesia with a 1:1,000 solution of nupercaine has been used as a routine during the past fourteen months for cystotomy, circumcision, meatotomy, hydrocele, excision of suprapubic fistulas, epididymectomy and incision of abscess, with entire satisfaction.

Necrosis at the site of injection has never been encountered, although a 1:200 solution has been repeatedly used for meatotomy.

Local vascular dilatation, as encountered with procaine, is present, but epinephrine, as advised and employed by some, has never been used by us.

The delay in anesthesia as compared to procaine is so slight that it can be disregarded.

The largest dose given by us was 105 cc. of a 1:1,000 solution; 40 cc. for caudal and forty minutes later 65 cc. for abdominal block. The operation was suprapubic cystotomy for implantation of radon seeds into a tumor of the bladder.

The usual dose for cystotomies is from 40 to 60 cc., although one patient, an extremely thin male with a distended bladder, required only 10 cc.

Surface (urethral and bladder) anesthesia with a 1:250 solution of nupercaine has been used, 1,000 times at a conservative estimate, during the past year in routine office work. No great force is ever employed.[31]

With the use of a 10 cc. bulb urethral syringe, the anterior urethra is gently distended with from 4 to 8 cc. and the meatus compressed for from two to three minutes. The resulting anesthesia usually prevents spasm of the "cut-off muscle" and allows an additional 10 cc. to pass into the posterior urethra and bladder. Should any amount of force be required, a small catheter or a metal instillator is employed. Special precautions are taken when there is a known pathologic condition of the urethra. Anesthesia is satisfactory in ten minutes.

The resulting anesthesia is more profound and more lasting than we have heretofore seen. This is attested by the patients themselves. The absence of the burning sensation following the passage of sounds for stricture speaks for the duration of the anesthesia.

CONCLUSIONS

1. As compared to procaine, nupercaine shows the following characteristics:

(*a*) Toxicity in man is about twenty times as great.

(*b*) The anesthesia produced is relatively slightly delayed, more intense and from three to six times as lasting.

(*c*) The detoxification of nupercaine in carnivora is almost as rapid as that of procaine.

(*d*) In man the fall of blood pressure during spinal anesthesia by nupercaine is less than that from procaine and, when marked, is more immediate.

(*e*) The minimum blood pressure under spinal anesthesia is registered within half an hour, no matter which drug is used.

(*f*) With the doses employed by us in surface, local, block or caudal anesthesia, nupercaine has not intoxicated any patient, though several of our patients had previously been intoxicated by procaine.

(*g*) Nupercaine does not irritate the skin of the fingers nor cause onychia.

2. Two deaths are reported after spinal anesthesia with nupercaine.

3. The advantages of nupercaine over procaine are greater than the disadvantages. We are not disposed to use a mixture of procaine and nupercaine.

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31. During the past five years convulsions with unconsciousness (and recovery) twice followed the forced injection of 10 per cent procaine into the urethra. The authors feel that this solution was forced into a vein in each case.

AN EVALUATION OF THERAPEUTIC RESULTS IN ESSENTIAL HYPERTENSION

II. THE INTERPRETATION OF BLOOD PRESSURE REDUCTIONS *

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There is convincing evidence that a specific therapy for essential hypertension is not yet available.[1] If this is true, the continual appearance of articles reporting successful treatment means that many of these favorable reports arise from investigative fallacies. Certain fallacies that lead to erroneous reports of symptomatic relief in essential hypertension have been discussed in a previous communication.[2] The present paper emphasizes factors which, unrecognized or frequently disregarded, seem to have led to incorrect conclusions regarding the reduction of blood pressure in essential hypertension.

THE GENERAL SOURCES OF MISTAKES IN THE INTERPRETATION OF BLOOD PRESSURE REDUCTIONS

The individual fallacies to be discussed appear to spring from a source of error, provision against which is important in any research—the inadequate studies of controls. Many studies on the treatment of essential hypertension have lacked a sufficiently long and carefully regulated period of observation prior to the administration of therapy. This inadequate control period possibly results from the failure to recognize just what factors to control and may be avoided if one keeps in mind two closely related characteristics of essential hypertension: (1) the lability of the blood pressure and (2) the hypertensive personality.

The Lability of the Blood Pressure.—Lability here refers to the continual variation of the blood pressure. The blood pressure in essential hypertension is usually

* From the Medical Clinic of the Boston Dispensary, service of Dr. Joseph H. Pratt, and the Division of Research.

1. O'Hare, J. P.: Treatment of Hypertension, Am. Heart J. **2**: 510 (June) 1927. Mosenthal, H. O.: The Treatment of Essential Hypertension, J. A. M. A. **91**: 698 (Sept. 8) 1928. Weiss, Soma; and Ellis, L. B.: The Rational Treatment of Arterial Hypertension, J. A. M. A. **95**: 846 (Sept. 20) 1930.

2. Ayman, David: An Evaluation of Therapeutic Results in Essential Hypertension: I. The Interpretation of Symptomatic Relief, J. A. M. A. **95**: 246 (July 26) 1930.

lower in the morning than in the evening [3] and may drop to normal during sleep.[4] It is lower after a rest period than when taken without rest. In fact, in a group of seventy-six unselected hypertensive patients followed for a year and a half, 56 per cent at some time had a normal blood pressure when the latter was taken after a ten to twenty minute sitting rest period.[5] The blood pressure tends to be lower in a quiet room than in a noisy room. When some one enters a quiet room in which the blood pressure is being recorded, the blood pressure may rise (chart 1 *B*). If the patient suddenly becomes preoccupied with a disturbing thought, the blood pressure similarly may become elevated (chart 1 *C*). In chart 1 *D* there is the blood pressure curve of a patient sitting in a quiet room. The rise at point *b* is due to the fact that from *a* to *b* the patient said that he became very anxious to leave in order not to be late for work. The blood pressure may become more elevated during menstruation.[6] Furthermore, the diastolic blood pressure may vary as much by percentage

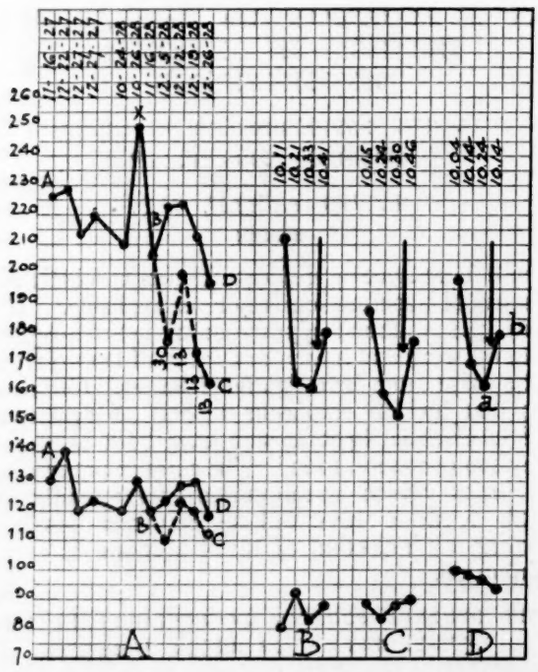

Chart 1.—Blood pressure readings in four patients: *A*, M. C., aged 60; moderate retinal arteriolar sclerosis, slight cardiac enlargement by orthodiagram and normal renal function; known hypertension for four years. At point *x*, the rise in blood pressure occurred when a different physician saw the patient. The numbers below curve B C indicate the length of rest periods. B, C, D.: The time figures above the blood pressure curves show the lenbth of rest period between readings. The arrows indicate the approximate time at which the disturbing events mentioned in the text occurred.

as the systolic.[7] Although many physicians appreciate this instability of the blood pressure level, they may overlook its great influence on their therapeutic results. The casual observer may be misled into thinking that it is a meaningless variation, whereas, in fact, lability is in direct relation to all changes in the patient's environmental, physical and psychic states.[8] Therefore, everything that affects the patient's environment, body and mind must be controlled as much as possible when one is evaluating the results of attempts to lower the blood pressure.

The Hypertensive Personality.—The lability of the blood pressure is closely related to the personality or "reaction tendency" of the hypertensive patient. Although little study has been made of the latter's "reaction tendency" it has been evident to some clinicians that their hypertensive patients form a special group whose personality is characterized by excessive reactivity.[9] This hypersensibility manifests itself early in life [10] and frequently seems to express itself through the overactivity of organs supplied by the vegetative nervous system. In general, the hypertensive patient seems to have the same type of reactions as the person with normal blood pressure, but the reactions are greater in degree. Thus, in a limited number of observations, it has seemed to me that the patient with essential hypertension tends to walk and work faster than the average; he is often more sensitive and more easily embarrassed than the average. Whereas the blood pressure of the normal person may rise from 10 to 30 mm. of mercury during excitement, that of the hypertensive patient more often rises from 30 to 100 mm. Similarly, when mentally at ease, the blood pressure of the hypertensive patient will fall much more than that of the person with normal blood pressure.

When the effect on the blood pressure level of both lability and the hypertensive personality is understood, it is seen that all factors that influence these characteristics thereby alter the level of the blood pressure. Unless these influencing factors are the same before treatment as during treatment, no adequate comparison or evaluation of results can be made.

Some of the factors modifying lability and the hypertensive personality will now be discussed, and an attempt will be made to show how the failure to recognize and control their influences has yielded many false successes in therapy.

INDIVIDUAL FALLACIES

Mistakes in the Determination of the Average Blood Pressure Before Treatment.—In evaluating the results of their attempts to lower blood pressure, many physicians use as control figures the average blood pressure of the patient before their special therapy is instituted.[11] In ambulatory patients the average is usually obtained from the blood pressure readings taken during the months or years of past observation in the office or clinic. This seems to be an accurate control procedure but actually may provide a loophole in an otherwise well planned study. In general, this method is inadequate because the past blood pressure readings to be averaged may have been taken under conditions different from those during the investigative period.

1. The Absence of Rest Periods: The most important of these different conditions is that the "control" readings previous to treatment are usually taken without rest periods, while the readings during the study are

3. Fahrenkamp, K.: Die Psycho-physischen Wechselwirkungen bei den Hypertonieerkrankungen, Berlin, 1926, pp. 40, 34. Kylin, E.: Die Hypertoniekrankheiten, Berlin, 1926, pp. 71, 72, 141.
4. Müller, C.: Die Messung des Blutdrucks am Schlafenden als klinische Methode, Acta med. Scandinav. **55**: 381, 1921.
5. Ayman, David: Normal Blood Pressure in Essential Hypertension, J. A. M. A. **94**: 1214 (April 19) 1930.
6. Fahrenkamp (footnote 3).
7. Ayman, David: The Diastalic Blood Pressure in Essential Hypertension: Its Variability, Arch. Int. Med., to be published.
8. Fahrenkamp (footnote 3). Kylin (footnte 3). Mosenthal, H. O., and Short, J. J.: The Spontaneous Variability of Blood Pressure and the Effects of Diet upon High Blood Pressure, Am. J. M. Sc. **165**: 531 (April) 1923.
9. Moschcowitz, Eli: Hypertension: Its Significance, Relation to Arteriosclerosis and Nephritis and Etiology, Am. J. M. Sc. **158**: 668 (Nov.) 1919. Herrick W. W.: Factors in the Prognosis of High Blood Pressure, Ann. Int. Med. **3**: 467 (Nov.) 1929.
10. O'Hare, J. P.; Walker, W. G., and Vickers, M. G.: Heredity and Hypertension, J. A. M. A. **83**: 27 (July 5) 1924. Ohler, W. R.: The Signs and Symptoms of Hypertension, Am. Heart J. **2**: 609 (Aug.) 1927. Ayman, David; and Pratt, J. H.: The Nature of the Symptoms Associated with Essential Hypertension, Arch. Int. Med., to be published.
11. Gager, L. T.: The Incidence and Management of Hypertension, J. A. M. A. **90**: 82 (Jan. 14) 1928. Stieglitz, E. J.: Bismuth Subnitrate in the Therapy of Hypertension, J. Pharmacol. & Exper. **32**: 23 (Nov.) 1927. Althausen, T. L.; Kerr, W. J., and Burnett, T. C.: Liver Extract in the Treatment of Essential Hypertension, Am. J. M. Sc. **177**: 398 (March) 1929.

usually taken after rest periods. The blood pressure observation prior to receiving treatment is in consequence an uncontrolled one, because it is done during routine outpatient or office practice, usually without future study in mind. In the clinic or office, blood pressure readings after the initial visit are usually taken without much ado. To compare such past readings with those taken after from ten to twenty minute rest periods is not justifiable, for in so doing the effect of lability is disregarded. In a previous paper it was shown that even advanced hypertensive patients will have a systolic drop of from 30 to 80 mm. of mercury on resting from ten to twenty minutes.[5] It is not all therapeutic effect, therefore, when the readings of the blood pressure, taken after rest periods during drug administration, show much lower figures than the "control" without a rest period. This is illustrated in chart 1 *A*, in which the curves A B D chart the blood pressure taken in a routine manner without rest, while the curves B C indicate the readings after rest periods. The average blood pressure in curves A B is 222 mm. systolic and 126 mm. diastolic, whereas the average of B C is 179 mm. systolic and 116 mm. diastolic. If therapy had been started at point B, one might be led to believe that the therapy had produced a fall in blood pressure of 43 mm. systolic and 10 mm. diastolic. It is possible to secure such curves in most ambulatory patients.

In ward patients, most physicians secure the average blood pressure by keeping the patients in bed for perhaps one or two weeks before starting treatment. During this time, the level of the blood pressure will frequently drop considerably below that during the ambulatory period of observation. The burden of proof rests on these physicians to show that the blood pressure would not continue to drop without treatment after a two-week control period in bed. In reality, Kylin [3] and Fahrenkamp [3] have shown that in some patients these drops in blood pressure do not appear until after two weeks or more in bed. In other words, systolic blood pressures on complete rest in bed may remain more or less constantly around 200 mm. of mercury, and then suddenly after one or two weeks of rest in bed drop to 150 mm. of mercury and continue to fluctuate.

2. Insufficient Frequency of Visits: Another important uncontrolled factor in securing the average blood pressure before treatment is that the visits to the clinic are much more frequent during the investigative period than during the control period. There seems to be in many cases a fairly definite relation between the frequency of visits per se and the height of the blood pressure; that is to say, the more frequent the visits, the lower the blood pressure within limits.[12] This is illustrated in chart 2, which represents the blood pressure of a patient whom I saw from April, 1929, to July, 1930. It may be seen that while being followed at about monthly intervals from April to October, 1929, the systolic blood pressure varied between 254 mm. and 232 mm. On the other hand, when followed at about weekly intervals from October, 1929, to May, 1930, the systolic blood pressure varied from 232 to 174 mm. During the latter period the patient was given some pink-colored water as medicine, and was taking no other known medication. The rise at point B occurred after an absence of one month from the clinic and after the omission of the pink-colored water. If "specific" medication had been tried at point A, an obviously serious misinterpretation of its effect would have resulted. Yet the case illustrated is merely an average case, of which I have seen many. The probable manner in which the frequency of visits operates on the blood pressure level is as follows:

First, consider again the hypertensive personality, for it is primarily through this channel and secondarily by means of lability that the frequency of visits probably affects the blood pressure level. The patient with essential hypertension seems to be excessively influenced by the enthusiasm, pessimism or indifference of his physician, which is reflected in the level of his blood pressure. To understand this clearly, one should picture the medical life of the average hypertensive patient. He knows too well the possibility of having a cerebral hemorrhage and, in his anxious quest of cure, wanders to many clinics. There often a busy physician, after a few brief questions, hastily writes a prescription, for example, for potassium iodide and, in a manner that the apprehensive patient regards as indicative of a lack of interest in his case, tells him to return in a few weeks

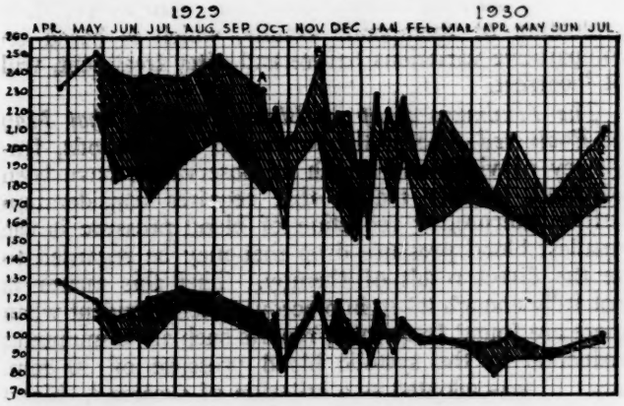

Chart 2.—Blood pressure readings of M. B., aged 62; marked retinal arteriolar sclerosis, slight cardiac enlargement by orthodiagram, and normal renal function; known hypertension for four years. The two curves that bound the upper hatched lines represent the systolic blood pressure variations, not only from visit to visit but also at each visit. The variations at each visit (due to from ten to twenty minute sitting rest periods) are represented by the vertical distance between two symmetrical points. The two curves bounding the lower hatched lines represent the same features for the diastolic blood pressure.

or months. At the next visit to the crowded clinic, frequently a different physician sees him, rapidly takes the blood pressure and either advises continuing the medicine or orders for example, a salt-free diet. So it continues during subsequent visits, with the patient still feeling anxious about his "high blood pressure" and dubious as to his future. Then a different physician appears who, with faith in some new drug, begins to treat the patient carefully, seriously and optimistically. The patient now returns two or three times a week and is carefully questioned, examined and advised. The patient naturally becomes interested and encouraged by the eager attempts to cure the disease which he believes may otherwise cause his death at any moment. He responds as most people would. He becomes happier, more contented and less excitable. The result is definite—there is subjective improvement [2] and, frequently, a fall in blood pressure, but the investigator may fail to separate this effect from any effect that might be due to the drug.

3. Inadequate Length of Pretreatment Observation: Aside from controlling the frequency of visits and the matter of rest periods, the pretreatment period must in

12. Ayman, David: Potassium Thiocyanate in the Treatment of Essential Hypertension: Its Impracticability, J. A. M. A., to be published.

itself be sufficiently long; for only by long observation can one get a true picture of the natural lability of the individual case.[13] By natural lability is meant the variation of the blood pressure that is due to the many changes that cannot be controlled—weather, natural course of the disease, emotional upsets, catamenia. It is partly through neglect of this long observation that many cases of hypertension are reported as showing a fairly fixed level of blood pressure. Thus, physicians frequently say the range of fluctuation of the blood pressure is in many of their cases only 10 mm. of mercury, more or less. This small, almost negligible, range of fluctuation would put these cases in a group usually seen in nephritis.[14] These cases are usually reported, however, as presenting normal renal function. In the absence of nephritis, systolic fluctuations of from 40 to 100 mm. of mercury have almost invariably been obtained in patients who have even marked hypertension. This is in accord with Kylin's and Fahrenkamp's studies.[3] Therefore, when physicians state that many of their patients with essential hypertension have variations of only from 10 to 20 or 30 mm. of mercury before treatment, it may be surmised that their cases have not been sufficiently observed. Therefore, their evaluation of therapeutic results, which is based on comparative variations before and after treatment, will be incorrect.

The Minimum Drop in Blood Pressure that May be Evaluated.—After the factors of rest periods, frequency of visits and length of observation have been adjusted, another matter that requires consideration before interpreting reduction of blood pressure is the smallest blood pressure drop that may be regarded to be the direct result of therapy. That this matter is not fully enough taken into account seems evident when there are found frequently, reports such as "a minimum reduction in the systolic blood pressure of 10 mm. . . . was adopted as a criterion of success." Many other writers report reductions of 20 mm. systolic as evidence of therapeutic success. It would seem that it is possible to evaluate from 10 to 20 mm. drops in blood pressure only after extremely long, unbroken observation before treatment, as is permitted in only small series of patients. Brown [13] has recently demonstrated strikingly in an untreated hypertensive patient whose blood pressure was determined twice daily for three years that the blood pressure dropped from 10 to 20 mm. systolic during the summer months. It is because of such uncontrollable factors that only in cases so well followed as Brown's that variations of from 10 to 20 mm. can be regarded as due to treatment. It seems futile to regard seriously a fall of 10 mm. for a few weeks in a person who has had for many years a blood pressure from 60 to 100 mm. higher than the normal.

O'Hare,[15] in reporting an average drop of 34 mm. systolic and 10 mm. diastolic in twenty-five patients treated with mistletoe, conservatively states that "previous experience with hypertensive cases has taught us that such variations frequently occur without any therapy." In my own studies, therefore, I have considered it reasonable to require persistent drops of at least 30 mm. systolic as a criterion of blood pressure drop due to therapy in otherwise well controlled studies, thus permitting a fair leeway for the effect of uncontrollable factors.

What may, perhaps, also be included in the subject of fallacies concerns the obscure, indefinite methods of reporting studies. Vague statements are made in many articles, such as "a moderate number of cases had a drop in blood pressure," "a large percentage," "many," "about," "so many," "results varied considerably," "there was a control period of study," and "the patient was followed for a long while." Such reports have little value. It appears within reason, therefore, for the critical reader to expect that all studies reporting attempts at therapy in essential hypertension should present, at least in tables or charts, the following facts in the individual case: (1) age, sex and known duration of the hypertension; (2) the number of years of recorded hypertension; (3) observations in the fundi, heart and kidneys; (4) the length of the immediate control period and the frequency of visits during it; (5) dosage of the drug, length of time it was given and frequency of visits; (6) length of time and how frequently the patient was followed after stopping the drug; (7) the method of taking the blood pressures, and (8) the average blood pressure during the control period, during therapy and during the post-treatment period. It seems only by such presentation that the results of any clinical study of this baffling therapeutic problem permit scientific evaluation.

CONCLUSION

Successful therapeutic reduction of blood pressure in essential hypertension may be simulated by many disregarded factors operating on the lability of blood pressure and the hypertensive personality. The failure to control adequately these factors has led to many apparent successes in the past.

484 Commonwealth Avenue.

13. Brown, G. E.: Daily and Monthly Rhythm in the Blood Pressure of a Man with Hypertension: A Three Years' Study, Ann. Int. Med. **3**: 1177 (June) 1930.
14. Kylin (footnote 3).
15. O'Hare, J. P., and Hoyt, L. H.: Mistletoe in the Treatment of Hypertension, New England J. Med. **199**: 1207 (Dec. 13) 1928.

OBSERVATIONS ON SENSITIVITY TO DUST FUNGI IN PATIENTS WITH ASTHMA *

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In the past six years a number of cases of asthma due to fungi have been reported. Storm van Leeuwen [1] described the production of asthma with the dust of grain infected by mites and also experiments in which allergic reactions were produced in guinea-pigs by grain infected with *Penicillium glaucum* and *Aspergillus fumigatus*. Cadham [2] observed three cases of asthma due to wheat rust (*Puccinia graminis*) in which inhalation of the rust produced asthma and a vaccine prepared from the rust gave some relief from the asthma. In 1928, Hansen [3] reported cases of sensitiveness to several different types of molds. Hopkins, Benham and Kesten [4] reported a case of asthma with eczema due to *Alternaria*. Asthma could be produced in this patient by inhalation of a spray of the filtrate or extract of a

* From the Laboratory of Medical Mycology and the Department of Medicine of the Columbia University College of Physicians and Surgeons.
1. Storm van Leeuwen, W.: Allergic Diseases, Philadelphia, J. B. Lippincott Company, 1925, p. 58.
2. Cadham, F. T.: Asthma Due to Grain Rusts, J. A. M. A. **83**: 27 (July 5) 1924.
3. Hansen, Karl: Verhandl. d. deutsch. Gesellsch. f. inn. Med. **40**: 204, 1928.
4. Hopkins, J. G.; Benham, Rhoda W., and Kesten, Beatrice M.: Asthma Due to a Fungus—Alternaria, J. A. M. A. **94**: 6 (Jan. 4) 1930.

culture of *Alternaria* and also by the intradermal injection of the filtrate. Recently, Bernton [5] has recorded a case as asthma due to *Aspergillus fumigatus*. He induced asthmatic symptoms by subcutaneous injections of an extract of the fungus.

Because of the omnipresence of saprophytic fungus spores and the frequency with which patients with asthma give positive reactions to dust, it was deemed advisable to test the sensitivity of the skin of a group of asthmatic patients to filtrates and extracts of fungus cultures.[6] The strains used were isolated from the dust of rooms occupied by patients with asthma or eczema. Of the fifty-five patients tested, eighteen were included because of positive skin tests to dust. The majority were chronic cases in which the causes of asthma had not been determined by routine testing with foods, pollens, hair, feathers, bacteria and other known excitants of asthma. The fifty-five patients were tested intradermally with eight or nine extracts of different fungi; of these, five patients reacted to one or more fungi with the production of wheals having definite pseudopods and a surrounding flair. Persistent inflammatory patches developed at the sites of several of these urticarial reactions and a sixth patient, who showed no wheals, developed delayed inflammatory reactions to three fungi. These reactions are summarized in the accompanying table. Two patients who gave positive immediate reactions (cases 1 and 4 in the table) were later relieved by elimination diets, and it is believed that their asthma was due to food.

Skin Reaction to Extracts of Fungi

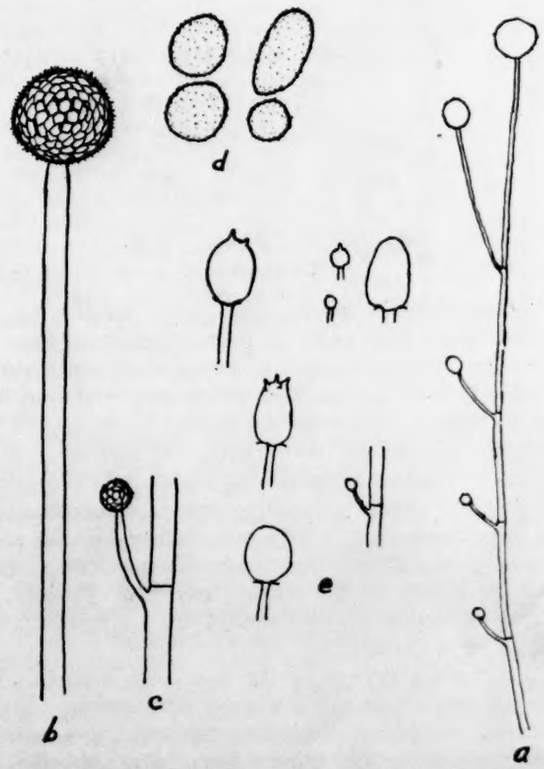
Strain	Number of Cases		Immediate Reactions Obtained				
	Positive	Negative	Case 1	Case 2	Case 3	Case 4	Case 5
71. Alternaria mali.....	0	54	0	0	0	0	0
76. Aspergillus niger.....	1	53	0	0	0	+	0
78. Aspergillus nidulans....	0	54	0	0	0	0	0
87. Hormodendron hordei.	1	52	+	0	0	0	0
97. Mucor plumbeus.....	2	52	0	0	0	+	+
106. Penicillium roseo-griseum Biourge.....	1	52	0	+	0	0	0
107. Paecilomyces variotii..	1	52	0	0	+	0	0
108. Penicillium aurantio-violaceum Biourge....	1	51	0	+	0	0	0
121. Tricothecium roseum...	1	52	0	+	0	0	0
125. Trichoderma Konigi....	0	52	0	0	0	0	0

Tests were made also with diluted filtrates of the broth in which the fungi had grown, but the results seemed of little significance on account of the high percentage of severe reactions observed in control tests with uninoculated broth in both asthmatic and non-asthmatic patients. Attempts to incite asthma by spraying the throats of twelve patients, who gave pronounced skin reactions, with filtrates of the fungi failed with one exception. A detailed report of this patient (case 5 in the accompanying table) is appended.

REPORT OF CASE

L. B., a British West Indian Negress, aged 39, was admitted in 1928 with a history of asthma of seven years' duration. There was no history of any allergic diseases in her family. Her history was essentially negative except for hay-fever in the early summer for the past sixteen years and an attack of pleurisy five years previously. Her present illness began in New York City in the summer of 1921 with typical asthmatic attacks occurring once or twice a year. About two years before admission the attacks increased in number and severity until they occurred on the average of almost once a week and lasted two or three days. The patient associated the asthmatic attacks with sweeping up dust. The physical examination was essentially negative except for numerous sibilant râles in the chest. Roentgenograms of the chest showed only moderate peribronchial thickening. Intradermal skin tests had shown the patient to be moderately sensitive to ragweed, timothy, kapok, orris, horse dander, cotton and wool, and strongly sensitive to dust. Desensitization to horse dander, wool and cotton was unsuccessful. Several elimination diets were followed without benefit. Because of the association of asthmatic attacks with the sweeping up of dust and the strongly positive skin test to dust, the patient was tested with twelve species of fungi. She gave strongly positive intradermal reactions, both immediate and delayed, to the extract and filtrate of *Mucor plumbeus*, and a positive delayed reaction to a filtrate of *Fusarium* and *Alternaria*.

An intranasal and intra-oral spray with a filtrate of *Mucor* produced typical asthmatic attacks with wheezing, coughing, and a sense of constriction so severe as to require relief by epinephrine. However, similar spraying with filtrates of *Alternaria* and of *Fusarium* did not produce asthma in this patient or in other asthmatic patients. A course of intradermal desensitization was attempted with the filtrate of *Mucor* without definite improvement.



Mucor plumbeus Bonorden: *a*, type of branching, each branch bearing a sporangium; *b*, upper part of a sporangiophore and a mature sporangium; *c*, small sporangium on a lateral branch; *d*, spores; *e*, different forms of columellae showing spines at the top and basal collaret, the remnant of the sporangial wall.

The following description of the mold that caused the attacks is contributed by Dr. Chester W. Emmons:

Mucor plumbeus Bonorden: Colonies of *M. plumbeus* develop rapidly as gray mycelial mats not exceeding 1 cm. in height. The sporangiophores, which are erect and reach 1 cm. in length, are branched, and all branches are terminated by sporangia. The sporangia are from 30 to 100 microns in diameter (occasionally much larger), those on the lower branches being much

5. Bernton, H. S.: Asthma Due to a Mold—Aspergillus Fumigatus, J. A. M. A. **95**: 189 (July 19) 1930.

6. The extracts and filtrates of the fungus cultures used in testing were the same as those employed by Hopkins, Benham and Kesten with the exception that the nitrogen content for the extracts was constant (10 mg. per hundred cubic centimeters of solution) and that the filtrates were diluted 1: 10.

smaller than those which terminate the upper branches. They are dark brown or black. The sporangial wall becomes spiny and at maturity dissolves away, leaving a remnant in the form of a collaret at the base of the columella. The columellae are spherical to oval or pear-shaped. Many of them bear spines at the tip. The spores are globose to oval and usually from 5 to 8 microns in diameter but sometimes larger. The spore wall is rough. Zygospores are globose and yellow brown, and the outer wall is warty. Chlamydospores form in the mycelium and sporangiophores.

The species is isolated from soil in the United States and England. It is heterothallic, and zygospores are not formed in our cultures.

M. plumbeus differs from *M. mucedo*, which is the common species, by its smaller size, by its branched sporangiophores and by other characters. It differs from *Rhizopus nigricans*, a common black bread mold, by its habits of growth. *R. nigricans* is stoloniferous, sending up groups of unbranched sporangiophores from above branched rhizoid-like hyphae.

SUMMARY

1. In a group of fifty-five patients with chronic asthma, eight, or 14 per cent, gave positive skin reactions to common air-borne fungi.

2. Typical asthmatic attacks were produced in one of these patients by spraying the nose and throat with a filtrate of *Mucor plumbeus*, one of the fungi to which the patient gave a positive skin test.

PRIMARY EPITHELIOMA OF THE URETER

CLINICAL DIAGNOSIS

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AND
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OMAHA

Our purpose in adding one more to the total of approximately fifty cases of primary ureteral tumor on record is to direct attention to a diagnostic finding which we believe to be unique and which may prove to be of clinical value in the preoperative diagnosis of this unusual and obscure condition. In this case it was possible to make a positive diagnosis while the ureteral wall was still intact, before the tumor had become larger than a pigeon's egg, before any changes in the kidney secondary to obstruction had taken place, without visible implants in the lower ureter or bladder, and without evidence of obstruction in the ureter to the passage of a catheter.

To include a review of the literature with this brief report would mean mere useless duplication. Reports of cases including thorough reviews and complete bibliographies on this subject have been published during 1930 by McCown,[1] by Okerblad and Helwig,[2] and by Rousselot and Lamon,[3] as well as by several others during the past decade. For obvious reasons, the total number varies somewhat with different authors. Rousselot and Lamon include summaries of forty-nine cases, besides one of their own. These authors state that in only fourteen of these fifty cases was the diagnosis made, or even suspected, before operation or autopsy. McCown likewise emphasizes the difficulty of diagnosis, stating that ureteral tumor was suspected before operation in only nine cases out of forty-four, while fifteen of these case reports were mere autopsy records. On the other hand, six case reports, appearing in the German literature, coincident with or subsequent to the appearance of the foregoing summaries, present rather an interesting contradiction. Of these six cases of ureteral tumor at least four, those of Kneise[4] (two cases), Grüneberg,[5] and Dzialoszynski,[6] were diagnosed before operation. The reference to the other two recent cases, those of Klages,[7] is not available.

The reasons for this low percentage of diagnostic accuracy are obvious. All authors agree that the average case does not present characteristic symptoms suggesting the diagnosis of ureteral tumor. McCown based his preoperative diagnosis on ureteral obstruction (both to catheter and to pyelographic fluid), and on recurrent hemorrhage on each of several occasions when an attempt was made to pass this point of obstruction. The one positive cystoscopic observation on which the diagnosis has been based in a few cases is the appearance of papillomatous implants protruding from the ureteral orifice. Other than this, a visible filling defect in the ureterogram is perhaps the most conclusive evidence, although this finding rarely is sufficiently clear-cut and definite, since the ureterogram is likely to show evidence merely of ureteral block such as might be caused by obstruction due to stricture or kink. Hematuria is of course the one most frequent symptom (approximately 75 per cent of cases), yet this

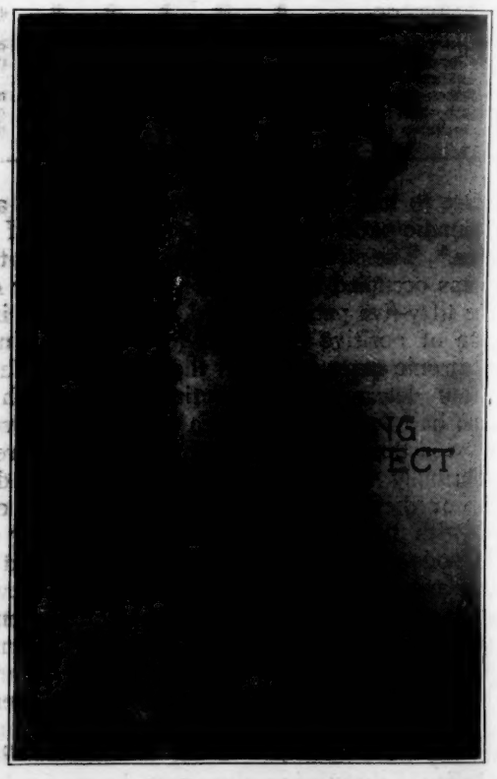

Fig. 1.—Original pyelogram, showing normal pelvis, and filling defect in ureterogram.

1. McCown, P. E.: Primary Carcinoma of Ureter, J. A. M. A. **94**: 468 (Feb. 15) 1930.
2. Okerblad, N. F., and Helwig, F. C.: Primary Carcinoma of Ureter: Report of Case, J. Urol. **24**: 451 (Nov.) 1930.
3. Rousselot, L. M., and Lamon, J. D.: Primary Carcinoma of Ureter: Autopsy Diagnosis, Surg. Gynec. Obst. **50**: 17 (Jan.) 1930.
4. Kneise, Otto: Das primäre Ureterkarzinom, Ztschr. f. Urol. **24**: 10, 1930.
5. Grüneberg, Julius: Primäres Harnleitercarcinom, Ztschr. f. Urol. **24**: 260, 1930.
6. Dzialoszynski, A.: Primäres Ureterkarzinom, Ztschr. f. Urol. **23**: 1004, 1929.
7. Klages, F.: Ztschr. f. urol. Chir. **28**: 413, 1929.

symptom in itself is not diagnostic. There is nothing characteristic about the pain, which is usually dependent on pathologic changes in the kidney, similar to those secondary to any form of partial ureteral obstruction.

REPORT OF CASE

A man, aged 70, came under observation, July 18, 1929, complaining of malaise, low grade fever and rather mild irritative bladder symptoms, and giving a history of a transient attack of hematuria in February, 1928. Although there had been no bleeding or other symptoms referable to the urinary tract in the meanwhile, he had had a complete urologic investigation elsewhere about October, 1928. With the exception of a moderate grade of prostatic hypertrophy (nonobstructive) the urologic observations were essentially negative at this time. A second report on the left ureterogram, made, however, with the knowledge of subsequent developments in mind, showed "a slight suspicion of a filling defect just below the brim of the (bony) pelvis." At the time of the first examination there was insufficient evidence for considering this ureterogram other than normal.

In January, 1929, the patient had an acute attack, characterized by frequent and burning urination, with a temperature ranging as high as 104 F. He also noted slight hematuria at this time. As nearly as could be determined, there had been no pyuria prior to this attack. The pyuria and the bladder symptoms persisted in varying degree, together with recurrent moderate temperature flare-ups, until the patient first came under observation in July, 1929. Urinary obstructive symptoms had never been conspicuous.

Fig. 2.—Ureterogram made three months after nephrectomy, also showing filling defect.

Preliminary examination in July showed merely a moderate grade of prostatic hypertrophy, without residual urine. There was a mild grade of pyuria. During several days of observation the temperature ranged around 100 F.

Cystoscopic examination was advised, July 28, on account of the sudden development of profuse hematuria. The urethra and bladder were found to be normal. Spurts of clear urine were observed coming from the right ureter, and definite bloody spurts from the left. The clue to the diagnosis was given by this finding, since clear urine was obtained through the ureteral catheter which had been passed to the pelvis of the left kidney, immediately after bloody spurts had been observed coming from the left ureteral orifice. Furthermore, subsequent partial withdrawal of the left ureteral catheter, so that its tip came to be in the lower third of the ureter, resulted in the immediate appearance of bloody urine through the lumen of the catheter. The source of the bleeding was thus positively localized in the ureter itself. This examination also showed each kidney to be free from infection, and each to have a normal function, as measured by the phenolsulphonphthalein test.

The plain x-ray films showed no evidence of calculus in the region of either kidney or ureter.

Pyelography showed each kidney pelvis normal in size, shape and position.

The left ureterogram (fig. 1) showed a definite, olive-sized filling defect at the level of the first sacral segment and, below this, a slight degree of ureteral dilatation. The right ureterogram was normal.

A diagnosis of left ureteral tumor was made at this time and complete ureterectomy and nephrectomy was advised. The decision as to this procedure was postponed. During the following two weeks the patient was up and about, and in good general condition.

Fig. 3.—Excised ureter, opened longitudinally after removal, to show tumor and implants.

August 20, the patient was taken with a severe chill and elevation of temperature to 105 F., associated with a dull ache in the left flank, and with extreme prostration, characterized by perspiration, cyanosis, rapid pulse, and a marked drop in blood pressure. This critical condition persisted, with repeated chills, until August 22. On this date a catheter was introduced to the pelvis of the left kidney, with the withdrawal of bloody urine, showing pus cells and bacilli under the microscope. This procedure was followed by a drop in temperature and an improvement in the general condition, although the exact cause of the extreme prostration during this attack was never satisfactorily explained.

Nephrectomy (left) was carried out, August 27, under nitrous oxide anesthesia. On account of the patient's recent critical condition (secondary, apparently, to absorption from an infected and poorly drained left kidney) it had been decided to perform nephrectomy and ureterectomy in two stages. The left kidney was found to be essentially normal and to show no gross evidence of inflammatory change involving either parenchyma or pelvis. Serial sections of this kidney showed no evidence of new growth. The pelvis and the portion of excised ureter were likewise free from papillomatous growth.

The patient made an uneventful recovery following nephrectomy and was without gross hematuria for the better part of a year. For this reason and in the absence of other symptoms, the program as originally outlined was changed, and ureterectomy was indefinitely postponed.

A ureterogram of the nephrectomized ureter (fig. 2), November 8, three months after nephrectomy, showed the entire ureter filled with iodide solution well up to the point of amputation, with the exception of a vacant "gap" or filling defect about 2.5 cm. in length at the level of the supposed tumor.

Cystoscopic examination was repeated, July 2, 1930, ten months after nephrectomy, because of recurrent attacks of transient hematuria during the preceding two months. On this occasion, definite peristaltic spurts of blood were seen coming from the orifice of the nephrectomized ureter.

Ureterectomy (left) was performed under spinal anesthesia, July 17. The ureter was found to be soft and pliable throughout its length and to be entirely normal, with the exception of the presence of an olive-sized fusiform swelling at the junction of its middle and lower thirds. The ureteral wall was intact throughout its length. The surrounding tissues at the level of the tumor were likewise soft and pliable and showed not the slightest evidence of invasion. The patient made an uneventful convalescence.

The excised ureter, slit open longitudinally, is shown in figure 3, the oval-shaped olive-sized tumor being attached to the posterior wall of the ureter by a slender pedicle. Close inspection of figure 3 also shows a cluster of small implants just below the tumor, as well as a larger implant near the upper extremity of the ureter. The latter is white and is not to be confused with the uppermost bulbous extremity of the ureter, which is darker and is made up of fatty and fibrous tissue, adherent to the ureteral stump. At the time of ureterectomy, the lumen of the ureter was not opened into, and there was no evidence of invasion around the ureteral stump, which had been made at the time of nephrectomy.

Microscopic sections of the ureteral tumor were examined by Dr. A. C. Broders of the Mayo Clinic, who reported as follows:

"The tumor is of ureteral origin as it can be traced directly from the ureteral mucous membrane. It is a grade 1 papillary squamous cell epithelioma, the same as those that occur in the urinary bladder and the pelvis of the kidney. The cells are for the most part of the squamous type, showing almost complete differentiation. Mitotic figures are very scarce. This grade of epithelioma of the urinary tract shows practically no tendency to metastasize. However, its implantation qualities are well known."

COMMENT

We have considered this case record of unusual interest because of the clear-cut and definite evidence presented by the ureterograms, and more particularly because of the unique observation which positively established the bleeding as ureteral in origin, rather than renal. We refer to the obtaining of clear urine from the renal pelvis, coincident with the time that there was visible bleeding from the orifice of the ureter on the same side. The diagnosis of ureteral tumor was thus suggested by this observation and by the exclusion of other causes (calculus, tuberculosis, pyogenic inflammation), and confirmed, before operation, by the ureterogram.

107 South Seventeenth Street—City National Bank Building.

Definition in Nephrosis.—Nephrosis is a rare chronic disease of children and young adults, usually insidious in its onset and without any definite relationship to infectious diseases in most cases although in some the condition seems to follow chilling, upper respiratory infections, or active lues. The underlying cause is not known. The clinical features are both positive and negative, the latter as important as the former. Among the positive findings are subcutaneous edema and fluid in serous cavities, albuminuria, oliguria, waxy pallor, typical urinary sediment, good renal concentrating ability, decreased protein and increased lipoid content of the plasma or serum and decreased basal metabolic rate. The negative or absent findings are hematuria, increased blood pressure, cardiac hypertrophy or enlargement, abnormal peripheral or retinal arteriosclerosis for the age of the individual, renal insufficiency and true uremia. The course is typically chronic, with remissions during which all of the signs and symptoms, with the exception of albuminuria, may disappear. Complete recovery may occur after months or years of a checkered course of ups and downs. Often, however, the general state of the patient is such as to predispose him to various acute and chronic infections, particularly pneumococcal in origin, the outcome of which is very likely to be fatal.—Leiter, Louis: Nephrosis, Medicine **10**:140 (May) 1931.

TIC OF DIAPHRAGM (POSTENCEPHALITIC) RELIEVED BY RESECTION OF PHRENIC NERVES

REPORT OF CASE

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Aside from its rarity, this case presents the following points of interest: (1) normal chest movements supplanted by rapid and shallow excursions of the thorax governed by diaphragmatic spasms at the rate of about 200 a minute; (2) disappearance of the spasms and restoration of normal movements immediately after resection of both phrenic nerves; (3) reappearance of the spasms nine months after operation; (4) disappearance of the spasms and restoration of normal movements again after total avulsion of the left phrenic nerve; (5) reappearance of the spasms six weeks after the second operation; (6) final disappearance of the spasms and restoration of normal movements after avulsion of the regenerated right phrenic nerve.

The history of the case is as follows:

Mrs. E. J., white, aged 37, a housewife, consulted me, April 15, 1928, obviously suffering from harassed breathing. Four years before she was ill for several weeks, complaining of drowsiness followed by mental disturbances, especially lapses of memory, which lasted about eight months and then gradually disappeared. During the fourth week of the illness she had a sudden attack of tumultuous palpitation, after which the heart seemed to stop; the respirations became very slow and extremely difficult, and three weeks later there began attacks of rapid breathing, lasting only a few minutes. At first these attacks occurred once a day, but for the past few years they had been almost continuous: the "respirations" had been about 200 a minute; this rapid breathing had caused severe exhaustion, although the patient was able to do her housework. During the past year she had frequently fallen backward. She had been able to sleep only four hours each night. Oculogyric crises and spasms of the facial muscles and extremities occurred at intervals. She consulted a neurologist in a nearby metropolis, who made the diagnosis of brain tumor with a life expectancy of two years. She was discharged from a noted clinic with the diagnosis of hysteria.

At examination, the eye was immediately attracted by the chest as it underwent extremely rapid and shallow excursions at the rate of 200 a minute. It soon became apparent that normal respiration was held in abeyance and usurped by spasmodic jerkings of the diaphragm, which constituted the entire clinical picture. The heart was not unduly accelerated, nor was the patient's color cyanotic. The blood and the urine were normal. The fluoroscope showed fluttering of both sides of the diaphragm.

June 1, under ethylene anesthesia, both phrenic nerves were exposed, and 2 cm. was resected from each. Division of one phrenic nerve had no effect on the respiratory rate, but as soon as its colleague was divided the rate dropped to 38 a minute, the diaphragm became still, and the now unshackled chest resumed its bellows-like rise and fall.

Four hours after operation the respiratory rate fell to 20 a minute, and this rate held at the time of the patient's discharge from the hospital. The attacks of syncope disappeared.

In April, 1929, the patient visited my office and stated that the rapid breathing had returned in March, about nine months after the operation, and that with its return the attacks of syncope had recurred. The respiratory rate at this time was 90 a minute. The fluoroscope revealed that the left side of the diaphragm was contracting spastically as before operation, the right side, however, being still.

A second operation was performed, Jan. 2, 1930. At this time the respiratory rate was 150 a minute. The left phrenic nerve was exposed and found regenerated, although its

diameter was much less than that of the normal nerve. It was divided near the middle of its cervical portion, whereupon the respiratory rate immediately fell to 36 a minute. The distal portion of the nerve was avulsed by curling it up with a hemostat: when uncurled and removed from the hemostat it measured 30 cm., although the nerve was stretched, and several of its branches of distribution to the diaphragm were recognizable. Soon after operation the patient's respirations fell to 24 a minute, then to 20, and at the time of discharge they were 18. At first she complained of pain in the chest along the course of the avulsed nerve, but this soon disappeared.

Six weeks after the second operation the patient noticed the beginning of an increase in the respiratory rate, from 20 at first to 25 a minute, gradually increasing until, in December, 1930, it had reached 100 or more. There was a concomitant return of the attacks of syncope and of falling backward.

This story makes it obvious that, at the time the left phrenic nerve was ablated, the right had regenerated almost to the point of conduction of impulses, although then there was no way of determining this. The situation was explained to the patient, who was promised permanent relief after ablation of the right phrenic nerve.

The third operation was performed, Jan. 29, 1931. On exposure of the anterior surface of the scalenus anticus muscle there was found, occupying the position and course of the wanted nerve, only that which resembled a coarse, white hair. This was drawn cephalad in an attempt to expose the thoracic portion of the nerve for the purpose of avulsion, but it was so weak that it broke under the tension; however, it was possible to trace it upward to the cervical plexus, where it was divided and removed.

The patient came out of the ethylene with a respiratory rate of from 20 to 24. One week later, when leaving the hospital, she said that she felt better than at any time since the onset of the malady seven years previously.

In the literature only three similar cases could be found:

The first case [1] was that of a man, aged 38, who first noticed disturbances of respiration two months after an attack of epidemic encephalitis. The breathing became hard and fast, 84 a minute. Operation was performed three months later. Under ether anesthesia the phrenic nerve was exposed on each side and frozen with a spray of ethyl chloride. The respiratory rate fell during the operation from 96 to 20. The authors stated that this patient's relief was merely symptomatic and perhaps only temporary.

The second case [2] was that of a woman, aged 67, who first noticed disturbances of respiration several weeks after the onset of an attack of epidemic encephalitis. The first attack of very rapid breathing lasted one hour: each morning thereafter there was a similar attack, the duration of the attacks gradually becoming longer until they eventually lasted from twelve to twenty-four hours each, with occasional intervals of freedom lasting from twenty-four to thirty-six hours. The rate of breathing was 130 a minute. Under local anesthesia the right phrenic nerve was exposed and merely divided, while the left phrenic nerve was frozen with a spray of ethyl chloride instead of being divided. Twenty-five days after operation the rapid breathing returned, averaging 90 to the minute. Fluoroscopic examination showed that the left side of the diaphragm was contracting rapidly. About seven weeks after the first operation the left phrenic nerve was exposed and divided, whereupon the respiration immediately became thoracic in type, and the rate again descended to 20 a minute, as after the first operation.

The third case [3] was that of a man, aged 51, who for three years had had irregular bilateral spasms of the diaphragm following encephalitis occurring as a complication of influenza. Under local anesthesia both phrenic nerves were exposed: the right nerve was divided, and about 10 cm. of the distal segment was avulsed, while on the left side the nerve was divided only. Eighteen months after operation the patient could breathe comfortably and was able to do light work.

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2. Dowman, C. E.: Relief of Diaphragmatic Tic, Following Encephalitis, by Section of Phrenic Nerves, J. A. M. A. **88**: 95 (Jan. 8) 1927.
3. Speirs, G. O.: Encephalitic Diaphragmatic Spasm Treated by Phrenicectomy, J. Nerv. & Ment. Dis. **69**: 407 (April) 1929.

CONCLUSIONS

Postencephalitic diaphragmatic tic is apparently due to central (toxic?) stimulation of the phrenic nerves.

Nothing short of total ablation of both phrenic nerves will effect a permanent cure.

The regenerated phrenic nerve is much smaller and harder to find than the normal one.

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HYPERSENSITIVENESS TO WOOL FAT

REPORT OF TWO CASES *

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The practical importance of hypersensitiveness to wool fat (lanolin) and to wool makes it seem advisable to publish the report of the two following cases. In doing so we will be as brief as possible and will consider neither the theoretical points nor the literature concerning sensitizations to the so-called epidermals, confining ourselves to our observations and the practical aspects of the question. Recently Ramirez and Eller [1] called attention to a case of hypersensitiveness to wool fat that was in many ways similar to the cases we report here.

For the sake of brevity we will give the essential points of the two cases together; both of these cases were mentioned by MacKee and one of us (M. B. S.) in the discussion of Sulzberger and Wise's [2] paper read at the Detroit session of the American Medical Association in 1930.

REPORT OF CASES

The patients observed were both otherwise healthy men and each presented an eczematous, dry and fissured, scaly eruption of the hands, wrists and forearms. Patient A, aged 32, was occupied as a salesman of woolen materials for the past seven years. Patient B, aged 35, was a dress designer. For six years the eruption in both cases had disappeared and recurred in irregular cycles, was at times extremely severe, and was absolutely refractory to treatment. They had been treated by many different physicians and dermatologists, with the limit of x-rays as well as with tar and chrysarobin, and with ointments intended to be soothing. The eruption was exudative and vesicular at times and each patient had slight scaling between the toes. Repeated tinea examinations of scales from the hands and feet were negative.

During the treatment it was seen that ointments almost always aggravated the condition. Therefore we decided to test the skin with the ingredients of the ointments used and in each case petrolatum and other ointment bases were negative, while wool fat applied as a patch test [2] gave a distinctly positive reaction, causing the appearance of an eczematous eruption at the site of the test. The results were the same when hydrous and anhydrous wool fat were employed and also when tests with wool fat from different manufacturers were

* From the Department of Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital.

1. Ramirez, M. A., and Eller, J. J.: The "Patch" Test in "Contact Dermatitis" (Dermatitis Venenata), J. Allergy **1**: 489 (Sept.) 1930.
2. Sulzberger, M. B., and Wise, Fred: The Patch or Contact Test in Dermatology: Its Uses, Advantages and Limitations, Arch. Dermat. & Syph. **22**: 519 (March) 1931.

applied. Scratch tests and immediate reactions were negative. Both patients improved materially when lotions and ointments without wool fat were substituted for the former medicaments and when precautions were taken to avoid contact with clothes containing wool.

When patient A was last seen, while the skin of the hands was rough and dry (he was forced to continue his work with woolens), he stated that the condition of his skin was better than it had been in many years. No acute eczematous eruption was to be observed. Patient B improved under the treatment outlined. When almost well, through an oversight, he received an ointment containing wool fat prescribed by a physician not acquainted with the case. One application of this ointment caused an acute flare up which again subsided under the proper treatment.

Although we have heard and read of many cases of eczema which are said to react badly to ointments and to become more irritated through their application, we have found no other reports of specific hypersensitiveness to wool fat. In view of the almost general use of wool fat as a base for ointments it is possible that some of the patients that "do not do well" under treatment with ointments may be hypersensitive to wool fat.

It is interesting to note that both of our patients were employed in occupations involving the handling of woolens (sensitization?). Patch tests with different wools and hairs were negative in patient B, while patient A reacted slightly to a patch test with wool.

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Clinical Notes, Suggestions, and New Instruments

TRICHOMONAS URETHRITIS *

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During the past ten years, many cases of leukorrhea in women have been definitely found to be associated with or caused by the trichomonas flagellate. Most of the work has been done by the gynecologist, both in this country and abroad. Recent investigators have asked the question whether this infection is limited entirely to the female or whether it may also occur in the male. In a review of the literature one may justly conclude that the trichomonas is a frequent invader of the female genital tract while its occurrence in the male seems exceedingly rare.

DeLee,[1] over ten years ago, gave a short account of his experiences with this type of infection, pointing out the ease with which the diagnosis could be made by examining microscopically the fresh leukorrheal bubbly discharge from the vagina. Later investigators, as Greenhill,[2] Davis,[3] and Kleegman,[4] support the observations of DeLee and contribute additional valuable information on this subject, pointing out, however, the difficulties in treatment. At the present time, the factors concerned in the etiology of this affliction are not all entirely clear. This point was stressed recently by Kleegman and may have considerable bearing on relapses and recurrences after treatment in from 10 to 30 per cent of cases reported. Among the German writers, Schmid and Kamniker,[5] Haupt,[6] Winter[7] and others have supplied considerable clinical data, although Haupt and Winter do not believe that the trichomonas is primarily pathologic in the vagina.

Laboratory and bacteriologic studies have been carried out by Cleveland,[8] Lynch,[9] Hegner,[10] Hogue,[11] Andrews[12] and others. At this writing there is no uniformity of opinion by the foregoing investigators regarding the different types of trichomonas, the morphologic characteristics, the number of anterior flagella and the significance of the so-called undulating membrane. Lynch, in one of his cases, reports that he recovered the protozoan from the vagina and from the mouth in the same patient, and he noted the difficulty in differentiating the two types. He believes that the organism has four anterior flagella and an undulating membrane on the ventral surface which works simultaneously with the anterior flagella in food taking. Greenhill, in 1928, corroborated the observations of Lynch. Cleveland, on the other hand, studying the trichomonas with dark field illumination and stained preparations, consistently found three anterior flagella and proposed the name tritrichomonas. He also proved that it was impossible to make cultures of the organism in the absence of bacteria.

Dastidar,[13] in 1915, reported four cases in which he recovered the trichomonas on centrifugating the urine. His discussion was brief and he concluded by saying "It would appear that the trichomonas may cause a mild urethritis attended by smarting or burning on micturition or even a discharge from the urethra, but this urethritis cures itself on the disappearance of the protozoan."

In 1927, Čapek[14] reported two interesting cases of trichomonas urethritis in the male. The important observations in his cases were a purulent urethral discharge, many nonspecific organisms, numerous trichomonads, many red blood cells and a large amount of pus and fibrin. The prostatic fluid in either case was not examined for trichomonas. One patient was married, and on examination of his wife the trichomonas was recovered from the vagina, cervix and urethra. Čapek suggested the examination of all urethral discharges in their natural state, emphasizing the fact that his practice was confined to a rather small community, and in one year's time, he had found two cases as described.

Our laboratory studies at the Northwestern University Medical School were made two years ago and appeared in a previously published article.[15] We studied the flagellate under dark field illumination and smears stained with Wright's stain. Our experience was that the typical ovoid outline and the flagella were stained with difficulty. However, we concluded that the trichomonas has only three anterior flagella and the so-called undulating membrane is only a pseudopodium, which seems to arise from the anterior flagellate side, move posteriorly and disappear. Successful cultures were obtained with equal parts of ascitic fluid and Ringer's solution. The cultures were reinoculated every five days. Cultures of the feces of one patient were grown in tap water for three weeks as recommended by Cleveland and gave negative results.

My object in this paper is to put on record two additional cases of trichomonas urethritis occurring with symptoms in the male urethra complicated with trichomonas prostatovesiculitis.

CASE 1.—L. J., a man, aged 36, was referred to the office with the complaint of a urethral discharge, itching and a burning sensation in the penis for eight days. He stated that he had had a gonorrheal urethritis fifteen years before and two attacks of nonspecific urethritis ten years and one year before, which lasted for only five or six days. He said that the smears of the last two infections were negative for the gonococcus. He was married and had two children; his wife had had no miscarriages, but had had leukorrhea for several years. The general physical examination was negative except for the genitourinary condition. The penis and scrotum appeared normal.

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9. Lynch, K. M.: Am. J. Trop. Med. **2:** 531 (Nov.) 1922; Cultivation of Trichomonas and Question of Differentiation of Flagellates, J. A. M. A. **79:** 1130 (Sept. 30) 1922; Am. J. Trop. Dis. **2:** 627, 1914-1915; Am. J. Trop. Med. **4:** 537 (Nov.) 1924.
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11. Hogue, Mary J.: Am. J. Trop. Med. **7:** 327 (Sept.) 1927.
12. Andrews, J. M.: J. Parasitol. **12:** 148 (March) 1926.
13. Dastidar, S. K. Gosh: Indian M. Gaz. **60:** 160, 1925.
14. Čapek, A.: Die Flagellaten-Urethritis des Mannes, Med. Klin. **23:** 1535 (Oct. 7) 1927.
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The external meatus was moist, and a mucoid, viscid urethral discharge could readily be expressed. The fresh secretion microscopically revealed many pus cells, motile trichomonads and a few red blood and epithelial cells. The stained preparation was negative for intracellular diplococci, but many nonspecific organisms were present. Rectal examination showed the prostate to be slightly enlarged laterally and infiltrated, symmetrical, with moderate tenderness, palpable median groove and no periprostatic involvement. The seminal vesicles were not palpated. The expressed secretion examined fresh microscopically revealed from 25 to 35 pus cells per high power field with many clumps, active motile trichomonads, few motile spermatozoa, a decreased number of lecithin granules and the usual prostatic epithelial cells. The preparation stained with methylene blue (methylthionine chloride, U. S. P.) was negative for bacteria. The urine was grossly clear, but the first glass contained many long shreds. Calibration of the anterior urethra with a 26 French diagnostic bougie elicited roughening and tenderness in the penile urethra. He was given a three minute anteroposterior urethral instillation of a 1:1,000 aqueous solution of acriflavine hydrochloride and instructed to return the next day. Five months later in response to an inquiry he stated that he had been entirely well and did not wish to be reexamined.

Fig. 1.—Three anterior flagellae and comparative size of the trichomonas, sperm and pus cells.

CASE 2.—I. J., a man, aged 36, Negro, married, presented himself to the Northwestern genito-urinary clinic complaining of itching on the ventral surface of the glans penis, a urethral discharge, burning on urination, urinary distress after intercourse, and nocturia once or twice for the past six months. He stated that he had not had gonorrhea previously. He was treated for a soft chancre in 1914 and for syphilis while in the army in 1918. There was no sexual dysfunction except urinary distress following sexual intercourse. His general physical examination was essentially negative. The pulse and temperature were normal. The blood pressure was 132 systolic and 90 diastolic, and the blood Wassermann and Kahn reactions were negative. Urologically, his penis, scrotum and perineum were normal (the patient had just voided before coming into the clinic). On rectal examination, it was noted that the prostate was slightly enlarged and infiltrated, symmetrical, not tender, the median groove palpable and no periprostatic involvement. The seminal vesicles were not palpated. Microscopic examination of the fresh, expressed prostatic fluid revealed from 12 to 15 pus cells per high power field, a few lecithin granules and many motile trichomonads. A culture of the prostatic fluid was made. The urine was acid, specific gravity 1.002, cloudy, and microscopically contained many pus cells with clumps and a few red blood and epithelial cells. He returned two days later with a full bladder of urine and stated that the symptoms were the same as on his previous visit. The urethral discharge was mucopurulent, viscid, and only one large drop could be expressed from the external meatus. Microscopically, the fresh discharge contained many pus cells with clumps, a few red blood cells, many epithelial cells and motile trichomonads. A smear stained with methylene blue was characterized by many nonspecific bacteria and many pus cells. With the two glass test, the first glass of urine was cloudy and the second was clear. A centrifugated specimen of urine revealed many motile trichomonads. The laboratory report of the prostatic culture noted an anaerobically and aerobically pure culture of streptococci. The direct smear of the prostatic fluid showed pus cells and occasional cocci and diplococci. The patient was given a posterior instillation with 2 cc. of 0.25 per cent silver nitrate and a three minute anterior instillation with 5 cc. of 0.25 per cent silver nitrate. He returned two days later stating that he felt much better. When the urethra was stripped rather vigorously a small amount of urethral discharge was obtained for reexamination. Motile trichomonads in this specimen were not observed. The voided urine appeared much clearer. Reexamination of the prostatic fluid again revealed trichomonads. Proposed calibration of the urethra was refused by the patient, and he never returned for further observation.

In a personal communication from Dr. P. S. Pelouze and his associate Dr. Anson L. Clark of Philadelphia, I received three reports of male patients who had urologic symptoms. After careful study, they presented clinical pictures of nonspecific prostatovesiculitis and urethritis (one case) associated with the trichomonas. The genital tract of the wife of one of the patients was examined and found "teeming with the protozoan."

For the last three years at the Northwestern Clinic, we have as a routine examined the expressed prostatic fluid in its natural state under the high power field. We have to date recorded nine cases of prostatovesiculitis associated with the trichomonas. During this time, we have examined approximately 3,000 specimens of prostatic fluid. This would give an incidence of 0.03 per cent. I believe this percentage is too low, however, as students are frequently not checked up on their microscopic examination. When the trichomonas has been discovered first by the student examining the slide, he will invariably report "many motile spermatozoa."

It would appear that male trichomonas infestations are not commonly observed; but when one realizes that many urologists are not in the habit of examining fresh urethral or prostatic fluid, it raises the question how many cases go undiagnosed.

Fig. 2.—Typical ovoid outline and axostyle of the trichomonas.

The urologist, on the other hand, sees many cases of nonspecific urethritis and they are treated as such. I believe that if the secretions from these nonspecific cases were examined in their natural state, many more cases of trichomonas infections could be recorded. The ordinary stained smears will not identify these protozoa and I feel that the simple technic as given by the gynecologist is timely and should be followed more closely by men who are treating and examining male urethras and prostates. Dr. Clark's patient suggests marital contact as an etiologic factor.

SUMMARY

1. The presence of the trichomonas is not limited to the female genital tract, and may occur in the male.

2. Male urethritis may be complicated with a prostatovesiculitis.

3. The motile protozoa may be readily demonstrated in fresh wet preparations.

4. Nonspecific urethral and prostatic secretions should be examined in their natural state.

5. A sufficient number of cases have not been seen to report on the treatment, although aqueous acriflavine hydrochloride and weak silver nitrate solutions have been found to be of value.

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DRY STORAGE OF CONVALESCENTS' SERUM

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The use of convalescents' serum, both in prophylaxis and in therapy, has in the course of the last few years become more and more widespread. Such a serum has been of the greatest service in the prophylactic treatment of measles; it is valuable in the treatment of scarlet fever patients who are oversensitive to horse serum; and in the prophylaxis and therapy of other diseases, too, such as poliomyelitis, it may apparently play a certain part.

It is, however, very difficult to obtain sufficiently large amounts of effective convalescents' serum at just the time it is required. In order to make possible the collection and distribution of such serums, centers have been established in many quarters for their suitable preparation and storage.

However, it has been found that serum in liquid form loses a good deal of strength after a comparatively short period of storage. The employment of a method of preserving convalescents' serum that will retain its efficiency to the greatest degree possible is therefore highly desirable. Such a method appears to be that suggested by Wiese, for example, of preserving the serum in a dried form.

At the convalescents' serum center existing for some years past at the Stockholm Epidemic Hospital, the greater part of the store of serum is kept in a dried form.

Our method of drying is the following: The sterility and the Wassermann reaction of all serums are tested, the serums of at least three donors selected, and mixed, 0.5 per cent phenol (carbolic acid) added to them, and the mixture poured in suitable portions into wide necked flasks. The measles convalescents' serum is divided into portions of 5 cc., the poliomyelitis serum into 10 cc., and the scarlet fever convalescents' serum for therapeutic use into 25 cc.

The serums are then placed in an exsiccator with a suction pump until they are completely dried, a procedure that takes from one to three days. After this, the flasks are corked, sealed with paraffin and stored in a refrigerator at a temperature of about + 4 C. Time and again specimens are taken for continual sterility control.

Even after several years, serum dried in this way can be dissolved in water fairly rapidly; i. e., in one or two hours. The phenol component appears to be important for solubility, as serum dried without the addition of phenol can be dissolved in water only very slowly and with the greatest difficulty after storage for any length of time.

The dried convalescents' serum has been found to retain its efficiency extremely well for long stretches of time. The measles serum, for instance, proved to be prophylactically effective after more than two and one-half years' storage, although somewhat larger doses of measles serum that is more than two years old than of fresh serum appear to be required to insure reliable prophylaxis. Particularly in children over 4 years of age, a dose of from 5 to 10 cc. of such a serum is required.

The scarlet fever convalescents' serum, too, still has a good therapeutic effect after one or two years' storage.

This method of preserving convalescents' serum seems to me to be particularly valuable in diseases appearing epidemically at longer or shorter intervals, such as measles and poliomyelitis. Through it, an effective serum obtained at a previous epidemic is available at the very outbreak of a new one, even after several years.

SUMMARY

Convalescents' serum, stored and dried, retains its efficiency for a long time—two or three years at least.

Stockholm Epidemic Hospital.

EFFECT OF "AVERTIN" ON THE CEREBROSPINAL FLUID PRESSURE *

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Since January, 1930, "Avertin" has been the general anesthetic of choice in the neurosurgical service of the Cleveland Clinic Hospital. This anesthetic has been employed in 130 neurosurgical operations with the most gratifying results and with no undesirable effects. The dosage has been as a routine the same, 100 mg. of "Avertin" per kilogram of body weight.

As far as can be determined clinically, "Avertin" apparently does not cause as great an increase in intracranial tension as

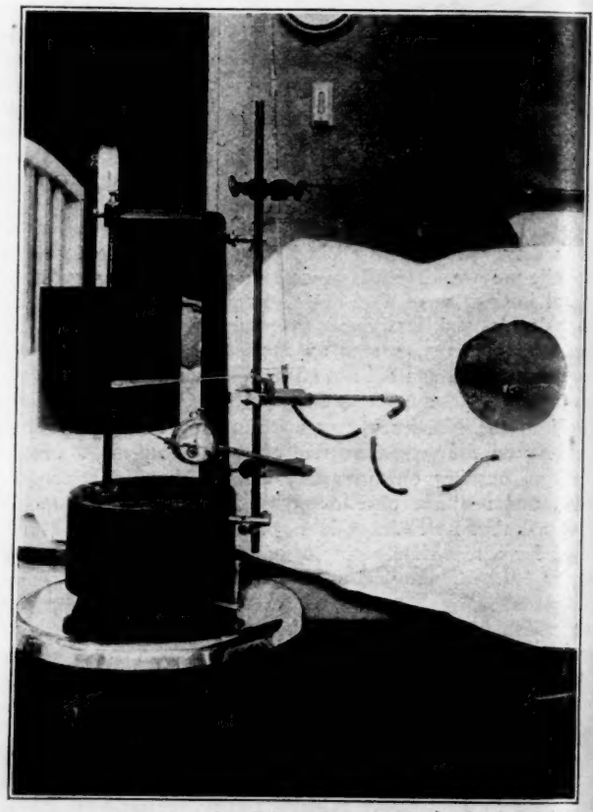

Fig. 1.—Technic of obtaining kymographic tracings of changes in the pressure of the spinal fluid.

do other general anesthetics, although it has been shown by spinal puncture that there is some increase in pressure following its administration. Also it has been observed that when "Avertin" was used as an anesthetic in encephalography, the ventricles occasionally failed to empty, even though there was no clinical evidence of obstruction in the ventricular system. It is possible that this failure of the ventricles to empty is due to an intracranial vascular engorgement which accompanies the state of narcosis, causing a partial obstruction of the narrow passageways of the ventricular system which transmit the vessels of the choroid plexus. This explanation, however, is entirely hypothetic.

In order to determine the effect of "Avertin" on the pressure of the cerebrospinal fluid, kymographic tracings of the changes of the pressure were made.

The procedure was as follows: With the patient in the horizontal position—the usual position for a lumbar puncture,

* From the Cleveland Clinic.

the head level with the spine and the lumbar puncture needle introduced into the subarachnoid space—a connection was made with a kymograph as shown in figure 1. One end of a rubber tube was connected to the lumbar puncture needle; in the other end a glass T tube was inserted, one arm of which was connected with the manometer and the other with the tambour, the tambour, the lumbar puncture needle and the zero point on the manometer all being on the same level. All the instruments were sterilized by heat except the tambour, which was immersed in alcohol for thirty minutes. Before the connection was made, the tambour, the manometer and the rubber tubing were filled with physiologic solution of sodium chloride, and all air bubbles were carefully removed. The recording lever of the tambour was adjusted and made to coincide with a time marker. The kymographic tracing was then begun, and a record was made of the pressure of the normal spinal fluid. When a normal reading had been obtained, the rectal tube was inserted and 100 mg. of "Avertin" per kilogram of body weight was administered. The tracing was continued until the patient had been sound asleep for some time and the pressure had become stabilized.

RESULTS

Figures 2, 3 and 4 show rather typical tracings: Figure 2 shows that the initial pressure, after the patient had relaxed from the excitement of having a lumbar puncture, was approximately 200 mm. of water. The stimulation produced by inserting the rectal tube caused an increase in pressure to 300 mm. of water. At the beginning of the administration of "Avertin" the pressure had resumed a level of 200 mm. of water, with a few slight fluctuations. One hundred milligrams of "Avertin" per kilogram of body weight was administered over a period of three and a half minutes. Five minutes after the beginning of the administration of "Avertin" the pressure had risen to 300 mm. of water. In nine minutes and a half the patient was asleep, at which time the pressure varied between 250 and 300 mm. of water. At the end of seventeen minutes the pressure varied between 230 mm. and 250 mm. and the tracing was discontinued. Changes in the pulse rate, respiration and blood pressure may be seen by consulting the tracing.

Figure 3 represents a forty minute tracing of the pressure changes of the spinal fluid following the administration of "Avertin." Figures 2 and 3 were selected as showing the most typical of six tracings. Figure 4 is a tracing that shows a rise in pressure below that which is usually found.

Fig. 2.—Changes in spinal fluid pressure following administration of "Avertin."

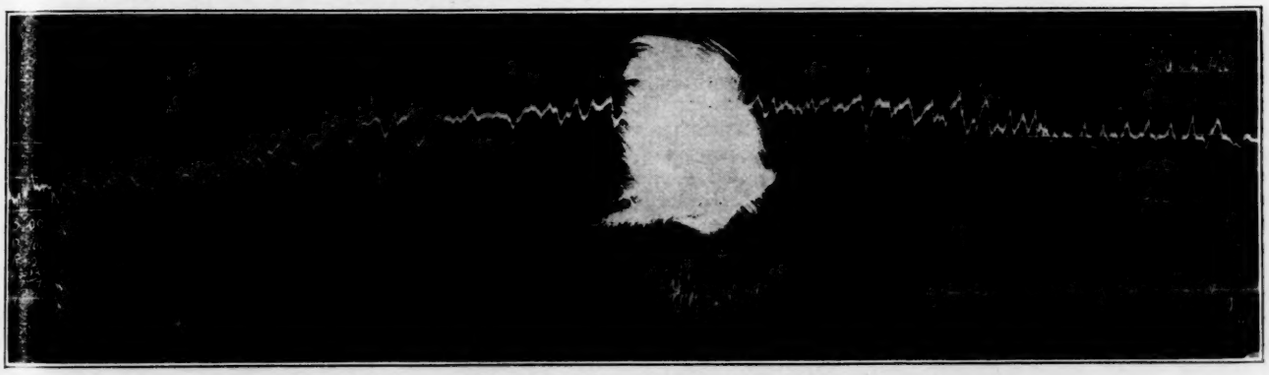

Fig. 3.—Changes in spinal fluid pressure following administration of "Avertin."

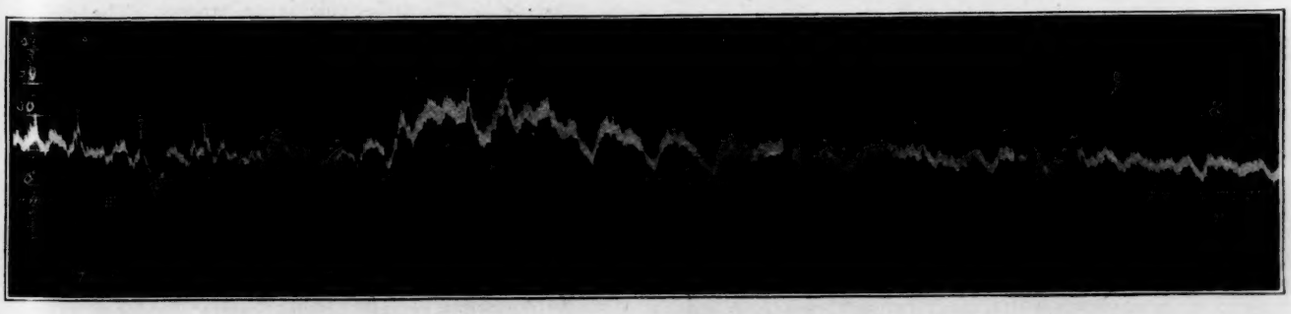

Fig. 4.—Changes in spinal fluid pressure following administration of "Avertin."

CONCLUSIONS

Accompanying the state of narcosis which follows the administration by rectum of 100 mg. of "Avertin" per kilogram of body weight, there is an increase in the pressure of the spinal fluid of approximately 100 mm. of water. After a lapse of from fifteen to twenty-five minutes after the administration of "Avertin" the pressure of the spinal fluid is approximately 50 mm. higher than the initial reading.

2050 East Ninety-Third Street.

Council on Pharmacy and Chemistry

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

W. A. PUCKNER, Secretary.

BISMUTHOIDOL NOT ACCEPTABLE FOR N. N. R.

In 1927 Les Laboratoires Robin, Paris, France, requested acceptance of Bismuthoidol, which is stated to be colloidal bismuth in isotonic solution. The product is distributed in the United States by E. Fougera & Co., New York. The Council examined the submitted evidence for the product and informed the proprietors that the evidence was insufficient to establish the claims advanced for the product. In 1930 E. Fougera & Co. again requested consideration of Bismuthoidol. In addition to a description of the product with specimens and advertising, the firm submitted publications dealing with Bismuthoidol, brief number 1 being *La médecine internationale*, January, 1926, 34th year, containing an article, "The Choice of a Bismuth Preparation" by R. G., Doctor of Physical Sciences; an article, "Bismuthoidol in the Different Phases of Syphilis" by Dr. Louis-Jean Debaure, with a few case reports. The doctor says that Bismuthoidol circulates rapidly in the spinal fluid but gives no proof for it; also that Bismuthoidol is a medicament above all others for tertiary syphilis, that the aortitides, stomachic ulcerations, ocular and nervous syphilis see their prejudicial effects quickly disappear and real improvement is produced in little time. Fourteen brief case reports are made.

The journal also contains an article, "The Therapeutic Action of Colloidal Bismuth" by Dr. M. Berthoumeau, chief doctor of the National Asylum of Convalescents of Paris. The doctor claims that with insoluble preparations of bismuth, and with the big dosage used, "symptoms of grave intoxications were observed which were not long in sowing doubt in the mind of the doctors and throwing discredit on, at least, certain bismuth preparations"; that in his work at the national asylum he had seen gangrene of the mouth, nephritis with a high quantity of albumin, without mentioning the numerous cases of black spots on the gums, accompanied sometimes by periostitis alveolaris, and showing the failure of the insoluble bismuth salts, or at least, if used, that they should be given with great circumspection and with weaker doses.

He claims that colloidal bismuth is by far the best treatment of tertiary syphilis and particularly tabes. Three case reports were made and the doctor sums up his conclusions with the assertion that colloidal bismuth has a rapid and a sure action as antisyphilitic treatment, and holds that because of its rapid elimination and harmlessness it is the best to be given in tabes. "The superiority of the colloidal bismuth lies possibly in the fact that it is divided into extremely small grains, free in its aqueous solution, which penetrate easily the barrier the meninges seem to oppose to insoluble bismuth salts in oily suspension." No proof of this contention is furnished, however. This pamphlet also advertises various peptonates and phosphates of the Robin company, which have not been accepted by the Council.

The firm's brief number two, "Bismuthoidol, Fine-grained Colloidal Bismuth in concentrated, aqueous solution," claims, among other things, that in using a colloidal bismuth, "By presenting the organism with a ready reduced bismuth we spare it the labor of dissolving it by the aid of acid alcohols which is always a slow process, and of its reduction in the glands. In this way we promote rapid absorption, the drug being ready to circulate forthwith." The dangers of insoluble salts of bismuth are set forth, as are also the dangers of shock if other bismuth preparations are used intravenously. The Council has gone on record (New and Nonofficial Remedies, 1931, p. 94) advising against the intravenous administration of bismuth compounds in the treatment of syphilis, for the reason that the therapeutic dose approaches too closely to the toxic when used by this route.

The pamphlet also advises the use, at the same time with Bismuthoidol, of Nuclearsitol Robin and of Sulfoidol Robin. In this pamphlet again the claim is made that Bismuthoidol rapidly circulates in the cerebrospinal fluid. A long bibliography is added to the pamphlet, some of the articles having to do with this drug, most of them apparently, however, being simply general articles on bismuth.

Brief number three consists of a catalogue of articles from the Robin Laboratories, including Bismuthoidol and other products which have not been accepted by the Council.

Without prejudice to any probable therapeutic value which the product may possess, the Council voted that E. Fougera Co., Inc., be informed that Bismuthoidol is at present unacceptable for New and Nonofficial Remedies because the submitted advertising shows that, if accepted, its acceptance would be used to advertise unaccepted products and because the claims made for the product are unwarranted.

COMMITTEE ON FOODS

THE FOLLOWING PRODUCTS HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COMMITTEE ON FOODS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THESE PRODUCTS ARE APPROVED FOR ADVERTISING IN THE PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION, AND FOR GENERAL PROMULGATION TO THE PUBLIC. THEY WILL BE INCLUDED IN THE BOOK OF ACCEPTED FOODS TO BE PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION.

RAYMOND HERTWIG, Secretary.

MERRELL-SOULE POWDERED PROTEIN MILK

(Higher in Protein and Lactic Acid and Lower in Lactose than Dry Whole Milk)

Manufacturer.—Merrell-Soule Company, Inc., Subsidiary of the Borden Company, New York City.

Description.—A powdered food made from milk; higher in protein and lactic acid and lower in lactose than dry whole milk.

Manufacture.—The whole milk used is obtained from inspected cattle and fulfils the requirements of the New York State Health Department. The dairies are regularly inspected by the company's inspectors. The milk as received is subject to chemical and bacteriologic control. Bacteria plate counts are made on deliveries from individual dairies. Dairies registering a high count are investigated and unsatisfactory conditions corrected.

The milk is heated to 190 F. for ten minutes, cooled to about 80 F., transferred to vats and inoculated with a 10 per cent culture of lactic acid bacilli. After about two hours, when the acidity has reached 0.60 per cent estimated as lactic acid and the curd has begun to set, the curd is cut and separated from the whey with an agitator. When the separation is fairly complete about 53 per cent of the batch is drawn off in the form of whey. The remainder is mixed with electrical beaters, cooled to 50 F. and dried by the Merrell-Soule spray process. The milk is sprayed under a pressure of 4,000 pounds into a tin lined chamber heated to 170 F. The drying is almost instantaneous. The powder is packed in tin cans.

Chemical Composition.—

(proximate analysis)	per cent
Moisture	3.0
Ash	5.0
Fat (ether extract)	27.0
Protein (N × 6.38)	37.0
Lactose	23.0
Lactic acid	5.0

Calories.— 4.83 per gram
137.1 per ounce

Micro-Organisms. — The pasteurization conduces to the destruction of pathogenic organisms. Routine laboratory bacteriologic tests are made on all batches, and any suspicious colonies are examined for presence of hemolytic and green-producing streptococci.

Claims of Manufacturer. — When restored according to directions to liquid form with water, it closely approximates Finkelstein's protein milk formula. It is indicated in cases of dyspepsia, alimentary intoxication (cholera infantum, diarrhea, etc.), marasmus and celiac diseases. For the new-born it is a complementary food in connection with breast milk.

It is free from pathogenic bacteria. The casein forms an exceedingly fine suspension with water, so that it flows through the nipple freely.

Clinical experience of the physician in hospitals and private practice indicates that results obtained with Merrell-Soule

Powdered Protein Milk are fully equal to those obtained by the daily preparation of protein milk from sour milk, according to Finkelstein's directions.

Certain pediatricians believe protein milk is of special value in infant feeding because of the following points: 1. Reduction of whey salts. Whey salts of cow's milk have an unfavorable action on the enzymes of the infant's alimentary tract. 2. High protein. Protein milk is well borne by infants even when the tolerance for some of the other food constituents is low. It tends to reduce carbohydrate fermentation and produces an alkaline reaction. 3. Low percentage of milk sugar. The low lactose content tends to inhibit fermentation. 4. High acidity. High acidity helps to bring about the required degree of acidity for proper gastric digestion of cow's milk protein. 5. Condition of the curd. The curds of protein milk are in a finely divided condition similar to those resulting from the coagulation of human milk.

SMACO (208) POWDERED SKIM MILK

Manufacturer.—S. M. A. Corporation, Cleveland.

Description.—An almost fat free skim-milk powder hermetically sealed in tins in an atmosphere of nitrogen.

Manufacture.—The milk used is collected in accordance with the provisions of the sanitary code, amendment 9 of the Cleveland Board of Health. On receipt at the factory the milk is pasteurized by the holding system, by which it is uniformly heated to a temperature of between 142 and 146 F., uniformly maintained at this temperature for thirty minutes and cooled to 45 F. or less immediately thereafter.

The milk fat is almost entirely removed from the pasteurized milk by a centrifugal separator. The skim milk is dried by spraying under high pressure into the top of a specially designed chamber. Hot air is forced in at the bottom. The milk powder falls on the chamber floor, from which it is automatically removed to the filling machine and packed in cans. The cans are vacuumized, filled with nitrogen gas to prevent oxidation of fats and vitamins, and hermetically sealed.

Chemical Composition.—

(proximate analysis)	per cent
Moisture	2.0
Ash	8.0
Fat (ether extract)	2.0
Protein (N × 6.38)	35.5
Lactose	51.0

(proximate analysis of normal dilution, 5 packed level tablespoonfuls diluted to 6 fluidounces.)

	per cent
Total solids	10.0
Ash	0.8
Fat (ether extract)	0.2
Protein (N × 6.38)	3.6
Lactose	5.2
p_H	6.4

Calories.— 3.64 per gram
103.4 per ounce

Micro-Organisms.—The manufacturer guarantees absence of pathogenic organisms for the reasons that:

1. All dairy farms supplying the milk are located in an "accredited area" into which it is illegal to ship cattle not approved by the Office of the Ohio State Commissioner of Animal Industry after examination for infectious diseases by properly qualified members of the State Veterinarian's Office.

2. All dairy farms supplying the milk used are inspected and approved by the Cleveland Board of Health.

3. All milk used is from cows periodically tuberculin-tested by an approved veterinarian in compliance with the standard test for tuberculosis of the Ohio State Department of Agriculture in accordance with uniform regulations set up by the U. S. Bureau of Animal Industry.

4. All milk is pasteurized immediately on receipt at the factory.

5. All air used to dry the product is filtered to eliminate any possibility of contamination from this source. The entire process, including packaging, is automatic and involves no handling at any point.

Claims of Manufacturer.—This product is intended especially for infant feeding. Each 8 ounce can is equivalent to 2¼ quarts of normal strength liquid skim milk. Any desired concentration for infant feeding may be prepared. The p_H of the dilution may be changed by the addition of lactic acid.

MEAD'S POWDERED LACTIC ACID MILK
Non-Curdling No. 2 Plain

Manufacturer.—Mead Johnson and Company, Evansville, Ind.

Description.—A powdered spray-dried homogenized milk containing added lactic acid.

Manufacture.—Clean, fresh, whole cow's milk fulfilling Chicago Board of Health requirements is standardized to 3.5 per cent milk-fat content and treated with lactic acid U. S. P. to produce an acidity of approximately 0.40 per cent expressed as lactic acid. The mixture is processed at about 230 F. for from two to three minutes in a "vacuum cylinder" to produce a noncurdling product with water and quickly cooled. The cool liquid is homogenized by forcing through small apertures under high pressure whereby the fat is dispersed in fine globules. The homogenized liquid is dried by spraying into a hot air chamber. The dried powder is packed in an atmosphere of inert gas in hermetically sealed tins.

Chemical Composition.—

(proximate analysis)	per cent
Moisture	1.5
Ash	6.0
Milk-fat (ether extract)	27.2
Protein (N × 6.38)	26.0
Lactose	36.3
Acidity as lactic acid	3.0
Calcium (Ca)	0.845
Magnesium (Mg)	0.072
Sodium (Na)	0.481
Potassium (K)	1.220
Phosphorus (P)	0.705
Chlorine (Cl)	0.767
Sulphur (S)	0.056
Iron (Fe)	0.0014
Copper (Cu)	0.0005
(diluted — 1 oz. to 7 ounces water)	
Ash	0.75
Milk-fat (ether extract)	3.4
Protein (N × 6.38)	3.3
Lactose	4.5
Acidity as lactic acid	0.38
p_H	4.5

Calories.— 4.94 per gram
141.4 per ounce

Vitamins.—The short heat processing in almost complete absence of air has little deleterious effect on the natural milk vitamins excepting vitamin C.

Claims of Manufacturer.—The powder may be readily mixed with cool or hot water to form a fine suspension. The mixture may be boiled without curdling or change of color or taste. It is recommended for infant feeding.

PAUL'S REDI-SLICED BREAD

Manufacturer.—Paul's Baking Corporation, Chicago.

Description.—A white bread made by the sponge dough method, in sliced loaf form.

Manufacture.—The sponge dough ingredients, 70 per cent patent flours of Northwest and Southwest wheats, water, yeast and a yeast food containing calcium sulphate, ammonium chloride, sodium chloride and potassium bromate, are mixed in a high speed mixer. The sponge dough is fermented for from four to six hours, after which are added flour, water, salt, sucrose, lard and sweetened condensed skimmed milk to make the completed dough, which is cut into pieces of desired weight by machine. The pieces are fermented for a short time, molded by machine into loaf form and panned. The panned dough is further fermented and then baked for from thirty to thirty-five minutes in a traveling oven with automatic steam and temperature regulation. The cooled loaves are wrapped in waxpaper.

The factory, equipment and storage rooms for the materials used are kept in strictly sanitary condition.

Chemical Composition.—

(proximate analysis)	per cent
Moisture (entire loaf)	37.0
Ash	1.77
Fat (ether extract)	2.7
Protein (N × 6.25)	9.6
Crude fiber	0.4
Carbohydrates (by difference) other than crude fiber	48.5

Calories.— 2.56 per gram
72.7 per ounce

Claims of Manufacturer.—A bread of good quality.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JUNE 20, 1931

HEAT PRODUCTION AFTER INGESTION OF PROTEIN

It has become a platitude that the transformation of protein in the organism is primarily the story of the behavior of amino-acids in the chemical changes involved in intermediary metabolism. When amino-acids reach the blood stream either after absorption from the alimentary tract or as the result of experimental introduction into the circulation, they do not tarry there long. In a short time they find their way into the tissues. Liver and muscle retain a considerable quota for some time. The sequence of events has been described by Halliburton and McDowall [1] as follows: Having loaded themselves with amino-acids, the tissues proceed to pick out those they particularly require, either to incorporate them into their own substance or for the production of secretions; those amino-acids not so required, however, may be retained or transferred to some tissue, where they are broken down and the non-amino part used as fuel. There are, then, two main processes in protein metabolism; first, the building up of amino-acids from the blood stream into the tissues and, second, the decomposition of the amino-acids not so required.

Precisely where the increase in metabolism takes place when otherwise unused amino-acids are completely decomposed to liberate energy seems to be more clearly established than it was a few years ago. Recently, Dock [2] of the Stanford University Medical School in San Francisco has found it possible, in suitably anesthetized animals, to make rapid observations of the rate of oxygen absorption before and after excluding various tissues from the circulation by ligating the blood supply. The method was used to study the oxygen requirement of different organs in animals on high and low protein diets in order to determine the intensity of metabolism in various tissues.

1. Halliburton, W. D., and McDowall, R. J. S.: Handbook of Physiology, Philadelphia, P. Blakiston's Son & Co., 1929.
2. Dock, William: The Relative Increase in Metabolism of the Liver and of Other Tissues During Protein Metabolism in the Rat, Am. J. Physiol. **97**: 117 (April) 1931.

In such tests the oxygen consumption—an index of the rate of metabolism—was only 8 per cent greater in the hind quarters when the diet was very rich in protein, while that of the abdominal viscera was 141 per cent greater during protein than during carbohydrate feeding. Dock has come to the conclusion that the liver is probably the chief site, and possibly the only site, of the intermediary metabolism of those amino-acids which raise the metabolic rate, and that at least 80 per cent of the specific dynamic action of these acids is due to the increased energy liberated by the hepatic cells during protein utilization. This harmonizes with observations made by Mann and his associates at the Mayo Foundation in Rochester, Minn. They failed to discover any increase in metabolism when amino-acids were administered to hepatectomized animals. It seems likely that amino-acids are deaminized in the liver, and almost certain that urea is formed in this active organ. What is more probable than that the energy-liberating metabolic breakdown of the amino-acids should take place for the most part, at least, in the liver?

DEHYDRATION AND THE INSENSIBLE LOSS OF WEIGHT

The idea of measuring the insensible losses from the body—perspiratio insensibilis—goes back more than three centuries to Sanctorius, who, in 1614, instituted the first quantitative estimates. Suspended on a movable platform attached to his ingenious steelyard, he made numerous measurements of his own loss in weight. The loss in weight is due to invisible gaseous emanations, chiefly water vapor and carbon dioxide. A few years ago Benedict and Root [1] of the Nutrition Laboratory of the Carnegie Institution of Washington in Boston returned to the principles developed by Sanctorius in what has been termed the first exact measurement of nutrition. They searched for ideal conditions for measuring the insensible perspiration. They noted that the environmental temperature, which profoundly affects the skin temperature, plays a decided rôle in the insensible loss. When the insensible perspiration of either pathologic patients or normal subjects (workers in the laboratory) was measured under these ideal conditions and the metabolism was determined at essentially the same time, it was demonstrated that the straight line curve based on the data for diabetic and thyroid patients may serve as an excellent index of the metabolism obtaining at the time of measurement of the insensible perspiration, even with normal persons.

Direct application of the classic method was presently made by Levine and Wilson [2] in New York in relation

1. Benedict, F. G., and Root, H. F.: Insensible Perspiration: Its Relation to Human Physiology and Pathology, Arch. Int. Med. **38**: 1 (July) 1926.
2. Levine, S. Z.; Wilson, J. R., and Kelly, Margaret: The Insensible Perspiration in Infancy and Childhood: I. Its Constancy in Infants Under Standard Conditions and the Effect of Various Physiologic Factors, Am. J. Dis. Child. **37**: 791 (April) 1929. Levine, S. Z.; Kelly, Margaret; and Wilson, J. R.: II. Proposed Basal Standards for Infants, ibid. **39**: 917 (May) 1930.

to the basal insensible loss and energy of infants and children. Johnston and Newburgh [3] have extended the method still further. In a recent report [4] it was asserted that the combined results of these authors have definitely established the practical utility of predicting the metabolism from measurements of the insensible loss. The only standard requirements stated so far are those having reference to the relative humidity and temperature of the environment for the avoidance of sensible sweating or chilling of the skin surfaces.

There is something appealing in a procedure that involves essentially only the use of a simple balance, particularly for children who always present difficulties of technic that adult patients can help the investigator to overcome in the measurement of basal metabolism. Manchester, Husted and McQuarrie [4] of Rochester, N. Y., have recently noted certain factors that may unexpectedly modify the insensible loss of weight in children. They admit that in a normal ("saturated") state of hydration there is a close parallelism between the insensible loss and the energy metabolism under ordinary conditions. For practical clinical purposes, this method of estimating the energy metabolism offers many advantages over the ordinary gasometric methods.

However, the Rochester pediatricians have ascertained that fairly marked dehydration from any cause interferes with the usefulness of the method, because the total insensible water loss is diminished to levels far below those indicated in the standard tables. Superhydration, due to excessive water drinking and to administration of the antidiuretic principle from the hypophysis cerebri (solution of pituitary or ampoules of pitressin), likewise interferes because in this state the values for the insensible loss may be far above those predicted from the tables. The type of diet and the mineral content of the ingesta apparently influence the insensible loss and should be considered in the interpretation of results when the regimen is undergoing sudden changes or is extreme in any respect. Dehydration is occasionally produced by a ketogenic diet or otherwise in the management of epilepsy; it occurs under other conditions also. The ordinary degrees of dehydration are not sufficient to alter the metabolic rate though they may affect the insensible loss. According to Manchester, Husted and McQuarrie, slight alterations in the state of hydration probably do not add significantly to the errors inherent in the method of estimating metabolism from insensible loss. With a given set of conditions for any particular subject, however, the correspondence between the total insensible water loss and the state of hydration appears to be sufficiently uniform to suggest the use of net changes in body weight as an approximate measure of changes in the state of hydration.

3. Johnston, M. W., and Newburgh, L. H.: Determination of Total Heat Eliminated by the Human Being, J. Clin. Investigation **8**: 147 (Feb.) 1930.

4. Manchester, R. C.; Husted, Clara; and McQuarrie, Irvine: Influence of the State of Hydration of the Body on the Insensible Loss of Weight in Children, J. Nutrition **4**: 39 (May) 1931.

GREEN LEAVES AND VITAMIN A

The current enthusiasms for the inclusion of green vegetables in the diet of adults and of children in particular finds its scientific justification in the content of inorganic elements and vitamins that these plant products are supposed to provide. A few years ago there seemed to be little to recommend the salad greens beyond the fact that they supplied a modicum of "minerals" and represented an edible form of roughage or "ballast" for the diet. In those days the dietetic reputation of spinach and its less derided companion "greens" rested largely on the preference of their consumers; there was no "health urge" associated with their use. Most persons craved some sort of green stuff and made corresponding selections regardless of any assumed special dietary virtues.

The discovery of vitamins and what they may mean in the nutrition of health has changed the attitude of students of the subject. Green leaves are as a rule rich in vitamins A, B and C—all essentials of nutritive well being. The reason for the traditional custom of eating greens has thus been disclosed. The greenness of many edible plant products is a variable that depends on several environmental factors, and sunlight in particular. Vitamin A seems to be associated in some way with the greenness; that is, with the relative development of chlorophyll in the plant. Dry seeds and etiolated plants are as a rule poor sources of vitamin A. The green shoots from the same starting materials are usually richer in this factor. Green cabbage exhibits a higher content of vitamin A than white cabbage; mushrooms that thrive in the dark lack abundance of vitamin A.

There is little reason to doubt, as Sherman and Smith [1] have pointed out anew, that the green plants of the water as well as those of the land synthesize vitamin A or its precursor under the influence of sunlight. Such a development in the small green plants of the sea presumably becomes the source of the abundant supplies of vitamin A that occur in cod liver oil; the cod, it will be remembered, has little fat elsewhere in the body.

The relationship between the vitamin A content of such familiar edible plant tissues as lettuce and asparagus and their degree of greenness has been cogently demonstrated by Crist and Dye [2] at the Michigan Agricultural Experiment Station in East Lansing. Their latest investigations [3] deal with the effects of light of various qualities. By the selection of suitable glasses,

1. Sherman, H. C., and Smith, S. L.: The Vitamins, ed. 2, New York, Chemical Catalog Company, 1931.

2. Dye, Marie; Medlock, O. C., and Crist, J. W.: The Association of Vitamin A with Greenness in Plant Tissue: I. The Relative Vitamin A Content of Head and Leaf Lettuce, J. Biol. Chem. **74**: 95 (July) 1927. Crist, J. W., and Dye, Marie: The Association of Vitamin A with Greenness in Plant Tissue: II. The Vitamin A Content of Asparagus, ibid. **81**: 525 (March) 1929.

3. Crist, J. W., and Dye, Marie: The Association of Vitamin A with Greenness in Plant Tissue: III. Vitamin A Content of Asparagus Grown Under Light of Various Qualities, J. Biol. Chem. **91**: 127 (April) 1931.

acting as light filters of different potencies, it has been possible to produce all degrees of greenness in asparagus shoots of the same age under otherwise comparable environmental conditions. Here again the parallelism between abundance of chlorophyll and richness in vitamin A was clearly demonstrable. This gives point to the contention of Schertz [4] that further progress in a knowledge of vitamin A may depend on the industry and the success of the biochemists and the plant physiologists in their efforts to solve the mysteries of chlorophyll and its functions.

The mysteries and marvels of those remarkable physiologic potencies now described as vitamins, in lieu of a better understanding of their precise chemical nature and the consequent possibility of a more appropriate and precise nomenclature, are increasing alike to help and to baffle us. Recently vitamins have in increasing degree become the subject of jests and jibes of the columnists and even of dignified editorial writers. Investigators need not become discouraged or disconcerted by the current reaction; it is directed partly against pseudoscience and quackery in the promotion of nutrition. Enough is actually established to guarantee increased health and better growth for millions of human beings who, without this knowledge, might have perished.

Current Comment

THE NUTRITION OF THE RAT AND THE PROTEIN LEVEL

An editorial writer in the New York *Times* referred recently to interesting scientific studies on the conservation of vitamins by modern methods of food processing. The tests were made on the conventional laboratory animals. After presenting the evidence, he added this ominous comment: "What an opportunity for the man who yearns for the fresh flavor of green peas, new potatoes and corn on the cob to forget his manners and his vitamins and complain: 'I'm tired of all this rat food!'" Every investigator in the field of nutrition realizes the immense value of the rat in testing the hypotheses relating to human well being so far as this is conditioned by food. A year in rat life is equivalent to about thirty years of human experience. The advantage of this short cut to knowledge is obvious. Scientists do not insist or even assume that there is an identity of physiologic functions between man and the lowly rodent. They do call attention to many well tested analogies and the great service that has been rendered thereby to the study of man. Much information regarding the rôle of vitamins and amino-acids (or proteins) in nutrition is derived from tests on rats, notably the docile albino rats. Slonaker [5] of Stanford University has just reported the results of an elaborate series of prolonged feeding experiments on rats. They involved the much debated question of the optimal protein level. The outcome indicates that a diet containing between 14 and 18 per cent of protein would result in greatest efficiency in maximal growth, spontaneous activity, reproduction and life span in the rat. They also show that during the growing period the diets containing the larger proportion of protein produced the greater percentage gain in body weight. As the food yielded 3.82 calories per gram, this represents about 14 per cent and upward of the energy intake in the form of protein. The conventional (not the low) human standard of 100 Gm. of protein in a daily regimen of 2,800 calories represents 14 per cent of the energy supplied. Perhaps the advocates of the old Voit standard will find some satisfaction in the analogies between the two species.

4. Schertz, F. M.: Science **68**: 48 (July 20) 1928.
5. Slonaker, J. R.: The Effect of Different per Cents of Protein in the Diet: III. Intake and Expenditure of Energy, Am. J. Physiol. **97**: 15 (April) 1931.

Association News

CONTRIBUTIONS FOR MEDICAL SALON IN PERSHING MEMORIAL

The sum contributed for the Pershing memorial in Paris brings the total for this week to $2,468.10. The list of those who contributed during the current week follows:

Forrest N. Anderson, M.D., Los Angeles, Calif.
E. Harrison Ormsby, M.A., Amsterdam, N. Y.
J. P. Benson, M.D., Punxsutawney, Pa.
J. A. C. Clarkson, M.D., Lewistown, Pa.
John K. Ormond, M.D., Detroit, Mich.
James M. Templeton, M.D., Cary, N. C.
J. H. Page, M.D., Austin, Pa.
Joseph Dolin, M.D., Laurelton, N. Y.
George H. Ross, M.D., Durham, N. C.
Anonymous, M.D.
Forest Monroe Reid, M.D., Philadelphia, Pa.
John B. Elliott, M.D., New Orleans, La.
David P. McCune, M.D., McKeesport, Pa.
Harry Lowenburg, M.D., Philadelphia, Pa.

The following members of the Wayne County Medical Society, Detroit, have also contributed:

F. G. Buesser
Wm. L. Sherman
C. E. Simpson
J. J. Corbett
J. M. Robb
A. D. McAlpine
F. H. Cole
N. E. Clarke
B. H. Priborsky
A. L. Gignac
G. E. McKean
G. V. Brown
A. W. Blain
J. D. Curtis
H. F. Dibble
W. J. Cassidy
N. K. H'Amada
H. G. Chall
G. C. Penberthy
Geo. Sewell
W. R. McClure
H. W. Plaggemeyer
Geo. E. Potter
Lewis S. Potter
A. D. Potter
Willis A. Potter
R. Pino
F. M. Meader
B. Loney
L. F. C. Wendt
H. Kirschbaum
A. H. Whittaker
Don A. Bailey
Wm. M. Donald
C. L. Tomsu
W. K. Rexford
C. K. Valade
N. Allen
L. T. Crane
R. C. Connelly
L. M. Sa'Di
C. E. Lemmon
B. M. Hamil
N. Gigante
H. Mack
H. C. Saltzstein
G. H. Wood
Robert Moehlig
Charles Stuart Wilson
E. D. Spalding
H. Wellington Yates
J. Sullivan
R. L. Clark
Roy Lee Laird
D. S. Brachman
R. E. Loucks
J. E. Davis
C. E. Simpson
F. L. Robinson
Andrew Biddle
A. W. Erkfitz
T. F. Keating
H. R. Carstens
C. D. Brooks
R. C. Jamieson
Geo. Kamperman
Pearl Christie-Dowling
J. R. Rupp
Anonymous

MEDICAL BROADCAST FOR THE WEEK

American Medical Association Health Talks

The American Medical Association broadcasts at 10 a. m. on Monday and 10:30 on Saturday, over Station WBBM (770 kilocycles, or 389.4 meters).

The program for the week is as follows:

June 22. Ghosts, Superstitions and Miracle Men.
June 27. Scarlet Fever and Measles.

Five minute health talks may be heard over the Columbia Broadcasting System on Monday, Wednesday, Thursday and Saturday, from 1 to 1:05 p. m., Chicago daylight saving time.

The program for the week is as follows:

June 22. Periodic Health Examinations (cont'd.).
June 24. What Belongeth to Children.
June 25. What Happens to the Tuberculous Child.
June 27. What to Do for Poisoning.

PROCEEDINGS OF THE PHILADELPHIA SESSION

MINUTES OF THE EIGHTY-SECOND ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT PHILADELPHIA, JUNE 8-12, 1931

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 8

The House of Delegates convened in the Crystal Ballroom of the Benjamin Franklin Hotel and was called to order at 10 a. m. by the Speaker, Dr. F. C. Warnshuis.

Preliminary Report of the Reference Committee on Credentials

A preliminary report of the Reference Committee on Credentials was submitted by the chairman, Dr. J. D. Brook, Michigan, who reported that eighty-five delegates with proper credentials had registered and that a number of irregularities would be presented for the consideration of the House.

On motions duly seconded and carried, Drs. Merton Price, California, H. B. Everett, Tennessee, Martin E. Rehfuss, Section on Gastro-Enterology and Proctology, McLain Rogers, Oklahoma, B. F. Bailey, Nebraska, H. A. Luce, Michigan, B. R. Shurly, Section on Laryngology, Otology and Rhinology, and M. L. Stevens, North Carolina, who either had not received or had lost their credentials, and who had been properly certified as delegates, were seated.

The Speaker, not hearing any objections, declared that the list of delegates in the hands of the Reference Committee on Credentials would constitute the roll of the House for the first meeting.

On motion of Dr. Grant C. Madill, New York, seconded by Dr. A. J. Bedell, New York, and carried, Dr. A. W. Hornbogen, Michigan, was extended the privileges of the floor.

Adoption of Minutes of Detroit Session

The Secretary stated that the minutes of the last annual session of the Association had been printed and put into the hands of all members of the House of Delegates with a request that if any corrections were needed the Secretary be informed, and that the Secretary had not received any corrections. No objections being heard on the floor of the House, the Speaker declared the minutes as printed adopted.

Address of the Speaker, Dr. F. C. Warnshuis

The Vice Speaker, Dr. Albert E. Bulson, Indiana, took the chair, and the Speaker read his address, which was referred to the Reference Committee on Reports of Officers:

Members of the House of Delegates:

Through your gracious consideration and sufferance, I am once again privileged to open your annual session and preside over your deliberations. To do so in an impartial and considerate manner will be my studied endeavor and purpose. I am humbly grateful and bespeak your friendly assistance in order that your recorded actions may reflect in full and high degree the wisdom and judgment of this legislative body of our association.

Your Speaker has repeatedly reviewed and reflected on the rules and procedures that govern your deliberations with a view of tendering additional constructive suggestions. The result of this survey has reconvinced me that:

1. Equal representation is in evidence.
2. Opportunities for free discussion and presentations of opinions exist.
3. "Gag rule" or steam roller tactics are not tolerated.
4. Conclusions and enactments reflect unity of opinion and decision.
5. Every delegate is accorded full opportunity to represent his constituents and to present their recommendations and requests.

In brief, it may be confidently asserted that your annual deliberations are conducted in a most efficient manner and that your minutes well express the policies, activities and opinions of the profession of this nation. As officers and delegates we should ever maintain this position and attitude in order that we may retain the public's confidence and respect.

REFERENCE COMMITTEES

Your Speaker desires to reiterate that in making committee appointments a determined and impartial effort is made to give recognition to every state in proportion to its membership. When deviation is noted, it is to be remembered that equalization is not always possible. Larger state delegations must at times forego representation. It should be recognized that this is compensated by appointments and elections of members from their state to councils, bureaus, special committees and general offices and also by their opportunities to engage in discussions on the floor. An endeavor is also made to rotate the chairmanships. These appointments are made thirty days before the annual session. Because some state societies do not hold their annual meetings previous to this time, representation on committees is forfeited for the reason that your Speaker is uninformed as to who will be the delegates from these states.

By necessity, the annual reports of the Board of Trustees and the Secretary are voluminous. At times some very important recommendations are contained in the several subsections. Might it not be well to recommend that at the conclusion of these reports a summary of these recommendations and actions be compiled and that the reference committee stress these in its report rather than formulate a general statement concluding with a recommendation that the report be adopted? Your Speaker tenders this suggestion feeling that such a procedure would place emphasis and would impart to Delegates and especially to the membership the achievements that are being recorded.

Our By-Laws designate that committees be composed of five members. Your Speaker, seeking to relieve the work of the Reference Committee on Credentials, has designated seven members to serve thereon provided no objection is raised.

I am certain that you will pardon your Speaker's and Secretary's suggestion that in gaining the floor Delegates should make a studied effort not to speak to themselves, the floor or the ceiling. Let your voice be raised in loud acclaim that all may hear.

READING CLERK

At our last annual session, action was taken instructing your Speaker to appoint a reading clerk. Your Speaker assumes that Delegates are elected and attend the sessions for deliberative and representative purposes and not to serve in clerical capacities. In consequence, your Speaker has arranged with our Secretary to provide speech amplifiers and also to have available from the headquarters staff one who can serve as a reading clerk.

EXECUTIVE SESSION

The precedent was approved at our last session of holding one executive session during our annual meeting. In compliance with your action you have designated Tuesday, June 8, at 2 p. m. as the day and time for this executive session.

DECEASED FELLOWS AND MEMBERS

Each issue of THE JOURNAL brings to us the information of the passing to that unknown beyond of some fellow member, friend or associate. Some of them are unknown, yet were noble, self sacrificing physicians who administered to the needs of their community through snow or storm, in sunshine or rain and often in the wee hours of the night—God's noblemen, giving of self in order that they whom they served might benefit by reason

of our science. Others attained places in our halls of fame and were our revered leaders, counselors and consultants, known nation and oft world-wide. To them we pay sincere tribute. In the words of a former Speaker, "We shall carry on but possibly not so well or so far." They gave of self in unstinted measure to enhance all life. We salute them as defeated captains for we are always doomed to final failures in our encounters with disease. Who would have it otherwise?

Your Speaker makes official announcement of the death of E. Eliot Harris of New York, who passed away, February 25. Dr. Harris represented his state in this house over a period of fourteen years. Chairman of many of our reference committees, earnest and sincere in his discussions and debate, he contributed much toward the institution of sound policies and the wise solution of our problems. As a skilled and capable practitioner, Speaker of the New York House of Delegates, of keen mind and kindly disposition, he exemplified honor and inspired respect for the profession and was held in loving esteem. We revere his memory and record his deeds in our archives. Shall we not rise and standing in silence pay silent tribute to the memory of Dr. Harris and all those of our number who lie in eternal sleep?

Following the Speaker's address, the audience rose and stood in silence in tribute to members who had died during the year.

Reference Committees

The Speaker resumed the chair and appointed the following reference committees:

SECTIONS AND SECTION WORK

Frank W. Cregor, Chairman.....Section on Dermatology and Syphilology
A. J. Bedell.....New York
R. W. Fouts.....Nebraska
J. F. Hassig.....Kansas
E. D. LeCompte.....Utah

RULES AND ORDER OF BUSINESS

Alexius McGlannan, Chairman.....Maryland
A. C. Morgan.....Pennsylvania
G. P. Johnston.....Wyoming
W. Albert Cook.....Oklahoma
John H. O'Shea.....Washington

MEDICAL EDUCATION

N. B. Van Etten, Chairman.....New York
William Allen Pusey.....Illinois
Irvin Abell.....Kentucky
H. G. Stetson.....Massachusetts
John O. Polak..Section on Obstetrics, Gynecology and Abdominal Surgery

LEGISLATION AND PUBLIC RELATIONS

Holman Taylor, Chairman.....Texas
Grant C. Madill.....New York
Wells Teachnor, Sr.....Ohio
H. H. Shoulders.....Tennessee
J. W. Burns.....Texas

HYGIENE AND PUBLIC HEALTH

C. E. Mongan, Chairman.....Massachusetts
James R. Bloss.....West Virginia
W. F. Draper.....U. S. Public Health Service
Donald Macrae, Jr.....Iowa
J. H. Cannon.....South Carolina

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

E. C. Thrash, Chairman.....Georgia
John W. Amesse.....Colorado
J. F. Burnham.....Massachusetts
J. R. Kevin.....New York
D. E. Sullivan.....New Hampshire

REPORTS OF OFFICERS

W. F. Braasch, Chairman.....Minnesota
Seale Harris.....Alabama
H. C. Macatee.....District of Columbia
C. T. Pigot.....Montana
A. W. Booth.....New York

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

C. J. Whalen, Chairman.....Illinois
J. N. Hunsberger.....Pennsylvania
J. F. Hagerty.....New Jersey
E. F. Cody.....Massachusetts
William Kuykendall.....Oregon

CREDENTIALS

J. D. Brook, Chairman.....Michigan
G. H. Edwards.....Florida
George R. Proctor.....Idaho
J. Q. Graves.....Louisiana
H. A. Gamble.....Mississippi
S. J. Kopetzky.....New York
J. F. D. Cook.....South Dakota

MISCELLANEOUS BUSINESS

J. N. Vander Veer, Chairman.....New York
G. H. Mundt.....Illinois
F. S. Crockett.....Indiana
M. L. Stevens.....North Carolina
Roland Hammond.....Rhode Island

REAPPORTIONMENT OF DELEGATES

Olin West, Chairman.....Secretary of the Association
F. C. Warnshuis.....Speaker of the House of Delegates
B. R. McClellan.....Ohio
S. P. Mengel.....Pennsylvania
J. F. Smith.....Wisconsin

In view of the fact that the House has determined on a policy of having an executive session, the Speaker appointed the following Reference Committee on Executive Session, to which could be referred any business that might come up to be considered at the executive session, in order that the committee might bring an intelligent report for consideration when the executive session convened:

EXECUTIVE SESSION

J. Gurney Taylor, Chairman.....Wisconsin
Southgate Leigh.....Virginia
H. A. Royster.....North Carolina
B. L. Bryant.....Maine
Albert Soiland.....California

Address of President William Gerry Morgan

The Speaker presented the President, Dr. William Gerry Morgan, Washington, D. C., who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Members of the House of Delegates:

Two short years ago, when I came before you to express my appreciation of the high honor which you had conferred on me, I addressed you as friends, friends all. I was sincere. In my journeyings throughout our broad land to the meetings to which I have been invited you have, by your unfailing courtesy and cordial welcome, taught me the deeper meaning of friendship. For this I am grateful to you.

From you and the medical profession at large I have learned much that will prove of value to me for so long as I shall live. From my close observation of the daily work of the rank and file of bedside doctors, I have come to feel that there is a signal awakening among all classes of physicians. The quality of service to suffering humanity that is rendered at the bedside everywhere throughout our land is of a progressively higher quality, so that I come to the close of my period as your President with a profound conviction that little need be feared for the future of the practice of medicine in the United States. That there is, and has been for the past few years, a slow but steady trend toward federalized medicine can scarcely be doubted. I fear that it is somewhat fostered by a small percentage of our own members. I think that too much emphasis need not be placed on this influence. Lay writers criticizing the work of busy, conscientious, devoted physicians have been largely responsible for creating in the minds of the public a superficial sentiment for some sort of state medicine. I feel that I speak advisedly when I call it, as yet, a sentiment without profound conviction. The most potent antidote for this trend, which, if it materializes into an actuality, will prove more disastrous to the public than to the medical profession, is for us, each one of us individually, to strive to render the highest and most efficient type of daily bedside service that modern scientific medicine teaches. Let us not be content with doing our best unless it is the best that can be done.

As I address you, members of the House of Delegates, for the last time in my capacity as your President, I have a few suggestions to offer for your consideration.

Physicians practicing away from the great city of Chicago do not sufficiently appreciate the marvelous work or the prodigious quantity that is being carried on for our daily benefit by that band of intelligent, highly skilled, loyal and devoted men and women who are working almost literally day and night at 535 North Dearborn Street. I wish that I had the time at my disposal to mention in specific commendation the work of every one of them. However, I am going to ask you to permit me to speak of three of those workers.

You all know, and the profession at large knows something, of the tremendous and highly efficient work of our General Manager, Dr. Olin West. He has labored tirelessly and with all too few and much too brief respites. We cannot conceive of how we could function as an organization without him. I know full well that Dr. West does not care to be lauded, nor least of all to have it suggested that he should be given more opportunity for rest and recreation, lest there be created in the minds of the profession the idea that he is in the smallest way beginning to fail us, and such is far from my desire or intention to intimate. On the contrary, since Dr. West is such a valuable asset to the Association, and to every practicing physician in it, it should be our earnest desire and determination to preserve to the uttermost limits of time his service among us and for us. It is on account of this profound and sincere desire that I for the third time suggest that we must see to it that there be provided for him a highly intelligent, efficient understudy or assistants whom in the course of a year or two he could so train in the methods in which he has proved to be so highly efficient that he might from time to time steal away for the rest and recuperation which he in reality so much needs. As it is, Dr. West is not tempted to take these periods of relief from his arduous duties because he knows full well that when he returns to his desk he will find his labors so augmented as to rob him of much of the good which he had gained from such vacations. I have in mind not just simply an ordinary twenty-five hundred or three or four thousand dollar clerk. He is surrounded by plenty of such assistants. Rather would I attract to the position which I have in mind a young but highly skilled and thoroughly trained executive who would be capable in the course of time of being such a help to Dr. West that he could now and again lay down the burdens of office. If this is done, we shall spin out the duration of Dr. West's invaluable services to this Association for many years to come.

The only other two members of our staff which time permits me to mention are our able and devoted editor, Morris Fishbein, and the chief of our Bureau of Legal Medicine, Dr. William C. Woodward. I will not enumerate the virtues of these two splendid men, since time does not permit, but will affirm that every word which I have spoken concerning Dr. West applies equally to them. Picture to yourselves what a serious situation would eventuate at headquarters should one or all of these gentlemen be abruptly removed from his post of duty as might be the case by illness, accident or resignation, which might readily occur. It may appear to you that it would be an easy matter to fill the shoes of these executives of ours. To fill their places yes—but not to fill their shoes, to use that term in the old time meaning. Do we ever stop to consider why we can almost set our watches by the appearance on our desks of THE JOURNAL, the BULLETIN and HYGEIA? And why is it? Simply because Dr. West and Dr. Fishbein have an eye on neither the time clock nor the pay check. Had such been the case they would long since have wandered to other fields, where their monetary rewards would have been double or triple what they are with us, and their work days shorter and vacations more regular and of longer duration.

Your President and your Speaker in reality act as liaison officers, the former between the practicing physician and the Board of Trustees and the latter between the practicing physicians throughout the country and the House of Delegates. Their efficiency as officers of the Association ought to be greatly enhanced by some plan, if possible.

There has been for the past few years a discussion as to the question of location, in Chicago, of our headquarters office, as to whether we should, when the time is suitable, build our new home on our present site on Dearborn Street or whether it would be more advisable, looking into the future, to move it to some other part of the city. It would appear to me that the members of the House of Delegates should be in close consultation with the General Manager, the Editor and the Board of Trustees relative to this important question. Another phase of the same question is being discussed widely in the different states and that is as to the advisability of moving our headquarters in its entirety to the capital of our nation, Washington, D. C. I am hearing arguments pro and con by the advocates for and against this radical change of location. Living as I do in the capital city of the United States, and having a rather wide experience relative to the advantages and disadvantages of having the home office located there, I have come to feel that for many cogent reasons it would be vastly more advantageous for the future of our association to keep its headquarters in the geographic center of our land, where it has operated with such high success, and to the advantage of the whole profession, in Chicago. Although we should keep our headquarters in the Windy City, nevertheless I deem it highly advisable that the permanent office of the chief officer of the Bureau of Legal Medicine should be in Washington at least during the periods when our national legislature is in session. The arguments against this have been offered that, in the first place, Dr. Woodward, or whoever succeeds him in years to come, and may it be many a year, would lose touch with his work at headquarters. My answer to this is that, if he is given the efficient assistant which I have urged, the work at his headquarter's office would be carried on efficiently and, through the aid of the mail, the air mail, the telegraph and the telephone and television, he would be in constant touch with everything that went forward therein. The second criticism of my suggested plan is that the American Medical Association would come into an invidious position by being accused of having a "lobbyist at court." My reply to this is that, as the mental attitude of our legislators toward matters which are brought before them has developed, our representatives in the United States capital have come to realize the vital necessity of being completely informed on all matters on which they are requested to legislate. Those members of that august tribunal who shape and direct the actions of Congress make it their business to keep informed. They would eagerly welcome a fountainhead of reliable information on matters medical. Perhaps no man in the medical profession of the United States commands anything like the respect and confidence of the Senators, the Representatives and the Supreme Court Judges as is vouchsafed to William C. Woodward. He would add dignity and luster to the American Medical Association in the halls of Congress.

After my experience of two years in mingling in close contact with the physicians of our country, and being led to realize how little informed they are of the type and scope of the work at headquarters, of the various councils and committees and bureaus and of the Board of Trustees, I feel it is advisable, nay, highly important, that some plan be developed for constantly keeping them informed of all such matters in which they are not only interested but vitally concerned. I realize that this is being attempted, in a way, but it is not sufficiently efficient to penetrate very deeply into the minds and hearts of bedside physicians.

As a final suggestion may I leave with you the thought that the President-Elect and the President of our great organization attempt conscientiously to discharge to the uttermost the duties of these offices, the importance of which is sure to grow progressively from year to year. It is the highest honor that can come to any man to be elevated to be the President of the American Medical Association, which is in itself a sufficient reward. However, we cannot shut our eyes to the fact that it is at no small personal pecuniary sacrifice that the President of the American Medical Association, in the discharge of his duties, must and should absent himself from his private practice for a considerable part of the time that he is in office. It is true that the Association most generously defrays the traveling expenses of the President and the President-Elect and grants a per diem allowance for hotel and other expenses incidental to actual traveling, which it did not do until within the past few years. May I suggest, as I leave office, the advisability, in lieu of the allowances now made, that an honorarium of $5,000 or more be granted to the President and $2,500 or more be granted to the President-Elect during their respective terms in office? Such allowances would not only cover expenses incident to absences from home but would serve in some measure as compensation for the extra expenses that have to be incurred in the home offices as the result of the extra work therein.

In conclusion, may I say in the most profound sincerity that, whatever, if anything, I may have accomplished as your servant during my two years in office, it has been because of the wholehearted, loyal, moral support which you have given me at all times. Again may I extend to you my heartfelt thanks.

Address of President-Elect E. Starr Judd

The Speaker introduced the President-Elect, Dr. E. Starr Judd, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

Before submitting suggestions for your consideration, I want first to call your attention to the important place that the American Medical Association holds in the social and political structure of our country. Few of us as delegates and officers realize the scope of the work being done by those employed in Association headquarters. The American Medical Association is not only the largest but the most democratic and influential medical organization in the world. As such, the responsibilities are enormous. It is necessary to keep this organization moving to meet the changing times, and to see that the medical profession is always ready to give the very best medical service to society.

One of the chief duties of the House of Delegates is to elect the officers of the Association and the members of the Board of Trustees. Only by close association with the trustees of the Association can one fully realize the importance of keeping these positions filled by capable, conscientious men, regardless of politics or of friendship. The Board of Trustees holds in trust the property of the Association, is its board of directors, and is in a very responsible position. The Board of Trustees is continually concerned with various important problems, with many of which you are acquainted. In order that these problems may be assembled in your minds it seems best to summarize several of them at this time.

MAN POWER

An association is as strong as its man power. Few associations that I know of have as many capable and industrious officers and departmental heads as has the American Medical Association. This condition must be maintained. If, for any reason, a new man is needed to fill in and supervise a new bureau or to replace some one, the best person available must be obtained. In the selection of men for bureaus and committees there will constantly be competition with large organizations and foundations and the various medical centers. These foundations have much money to spend for personnel, and for this reason, if the Association is to continue to have the best, as it must have, it must expect not only to pay well but also to see that each and every one of the permanent men on these bureaus and committees is well cared for in every way. A strong financial foundation is necessary for the success of any organization and in order that our position may be maintained we must make every effort to increase our resources and to establish funds for stability and future development.

NEW BUILDING

Much has been said about a new building for the headquarters of the Association, and all are looking forward to the time when this plan can be carried out. I know that the trustees have given careful thought to plans for a new building, and any help that might be offered, I am sure, would be welcome. I understand that a building fund has already been started, but it does not seem to me that it would be good business to postpone the building of the contemplated structure until we have money enough to pay for it. It seems to me that it would be a fine thing if the medical profession itself could finance the structure. First of all, a new building would be a great source of pride and satisfaction, as well as most stimulating.

A new building would give an opportunity for more and better space for the development of our already large and active library. It takes many years to build up a library, and anything that facilitates this must be considered.

A room containing portraits of leaders in American medicine as well as those of leaders of medicine in other countries, and historical data concerning those who have accomplished much in medicine, will be most stimulating and appropriate in this building.

The new building should contain a small auditorium and several committee rooms of good size, some of which could be used as permanent quarters of the different councils.

In this country there is not much inclination toward the development of medical museums, and, when a physician is interested in looking up material, it is sometimes necessary for him to go to foreign countries to make the study. If, in the new building, there could be a place for a museum, within a few years it would be valuable. It takes much endeavor to develop such a museum. A start has been made by the establishment of the Central Scientific Exhibit. This association should have one of the best museums in the world.

The new building should be a place that all medical men coming to Chicago would visit and use, a building that all could enjoy and feel a personal interest in.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

The Council on Medical Education and Hospitals is one of the most important councils in the Association. It is doing all of the work that it can under the present circumstances, but it seems to me that its efforts might be extended so that it could take on other important duties. The Council has the responsibility of organizing medical activities so far as education and hospitals are concerned, and certainly its work will never be less.

The meaning of medical ethics should be made known to all students during their medical schools days. This Council should be given every opportunity to keep in close contact with the problems of medical education and hospitals, and a close association between this Council and the medical schools should be and is being maintained. Much of the expense to the patient is his hospital bill, and yet the patient is the patient of the physician and not of the hospital, and the physician should have more to say about some of the hospital problems.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION

The Bureau of Health and Public Instruction has ever-increasing duties and associations. The American Medical Association must be the leader in preventive medicine and public instruction and in public health activities. Public health and preventive medicine are the most discussed subjects in medicine today, and influence and leadership in this work must be retained.

Those who attended the meetings of the White House Conference must have been impressed with the fact that so few physicians were present. While the profession welcomes cooperation from the outside organizations, nevertheless it is of interest to society and of importance to medicine for us to retain our position in these affairs.

A great deal of very commendable work has been done on public health, preventive medicine, public instruction, child welfare, and all other phases of this subject by this bureau and also by certain state organizations. This is especially evident in Illinois, New York and several other states. I make a plea that we not only continue our efforts but that we enlarge them and maintain our position.

BUREAU OF MEDICAL ECONOMICS

The Bureau of Medical Economics is just being organized and ultimately will have all available information regarding the cost of medical care. So much misinformation regarding economics is being broadcast that it is certainly our obligation and responsibility to set this aright. This means a great deal of study and work, and is a task for those who have had much experience in these activities. There are few actual practitioners of medicine on the five-year committee on the costs of medical care. The statistical work of the committee has been tremendous, and a great deal of information will be available. It seems to me that a bureau made up of men from the Association would be better able to put the proper interpretation on the findings of this committee than would those in government and public health work alone. This bureau must have the best man power that can be obtained.

BUREAU OF LEGAL MEDICINE AND LEGISLATION

Better support of the Bureau of Legal Medicine and Legislation, and legal defense by the respective state associations, seems to be the proper method of caring for medical legislative activities. It is most important to have some plan of contact with legislators. Most states at the present time have legislative

committees and these committees are doing excellent work so far as their own state legislatures are concerned, but often no effort is put forth by any one in a given state to make sure that the representatives and senators of that state, in Congress, are kept informed regarding medical legislative measures. I believe that part of the faulty legislation on medical matters is the result of inactivity on the part of the medical profession. Although the Bureau of Legal Medicine and Legislation is at present studying these matters, has a legally trained observer in Washington, and sends representatives before congressional committees, I should like to suggest that it endeavor to have established in each state a committee on legislation as a part of the state organization (many states now have these legislative committees) and that methods be devised whereby these state committees may be kept in close contact with the Bureau of Legal Medicine and Legislation. Not all will be agreed on every matter that comes up, but at least there will be a central committee in each state that will be informed on how the others stand, and the result will be better knowledge of how to proceed.

TREND IN MEDICAL MEETINGS

The annual meeting of the American Medical Association is arranged by the Council on Scientific Assembly, and I think that the present plan should not be greatly changed. In my judgment, the sectional meetings should be continued much as they have been in the past. The programs are interesting and instructive, and there is much tradition behind them. I would suggest that one day out of the three be set aside for a clinical session to take the place of the reading of scientific papers. This has already been discussed by the Council on Scientific Assembly and I think has the support of this council. I believe that this would add greatly to the attractiveness of the program, and that it would not detract from that portion of the meeting which is taken up by the reading of papers. I think that the clinical sessions should be held in the regular meeting hall, and that all clinics should be dry clinics.

I should like to recommend to the House of Delegates and to the Council on Scientific Assembly that they encourage county and district clinical meetings. These local meetings could be called the American Medical Association Clinical Meetings; they could be supervised by the officers of the state and county associations and could be financed by those attending. Clinical meetings have been held for a long enough period now, so that their value is known. Many strictly clinical meetings are held throughout the country during the year. Some of these are sponsored by county societies, some by special groups and some by medical schools, but nearly all of them have good programs and accomplish a great deal. The American Medical Association should be getting some credit for these clinical meetings. Most of those taking part in the programs of these meetings are clinical teachers. Teaching is a part of their vocation, so that the clinics are well presented. Sufficient time to cover the subject well is allotted to each speaker. The American Medical Association cannot afford to change its annual meeting to any great extent, but it can help itself and also do a great service for the profession by helping with the district and county programs. If advisable, it could arrange other meetings of this kind from time to time. There are too many medical meetings at present, but there are not enough good ones.

PROPOSED BUREAU ON THE STUDY OF CANCER

I would like to suggest the formation of a bureau on the study of problems in connection with cancer. The function of such a bureau would be to affiliate with other committees and bureaus studying this subject, to investigate all research and all claims, and to have charge of all publicity with regard to cancer.

Remarks of Dr. George H. Simmons

The Speaker announced that in his opinion the Delegates would appreciate hearing a word from the Editor and General Manager Emeritus, Dr. George H. Simmons. Dr. Simmons made the following remarks:

Mr. Speaker and Members of the House of Delegates:

I think you have had enough speaking; especially have you had the officers' prepared papers. I have not prepared anything, but I will tell you what I like to see. You know, people who are getting toward the time they call old age like to reminisce, and as a general proposition when they start they don't know when to stop. Thirty-four years ago and now—what a contrast! I remember very well that the general meeting where the business was transacted was usually at the end of a long presidential address and the majority of the members had left for lunch and there was very little business done—how different from what it is today. You know the results when you look at these reports and see what the Association has done since the House of Delegates was created in 1901. It seems as though a man must have lived two lives to see it done.

One man impressed himself on me at that time, Dr. Hobart Amory Hare. He was the chairman of the Committee of Arrangements. I remember his clear ringing voice when he made announcements. I got to love the man at that time. I understand he is very low now, according to the papers yesterday, but it does bring up memories of those times. (Applause.)

REPORTS OF OFFICERS

Report of the Secretary

Dr. Olin West, Secretary, presented his report, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary, with the exception of the following: That part containing the amendment to the Constitution was referred to the Reference Committee on Amendments to the Constitution and By-Laws; the resolution by Dr. Moll, Michigan, contained in the report was referred to the Reference Committee on Medical Education, and the resolution presented by Dr. Brook, Michigan, also contained therein, was referred to the Reference Committee on Legislation and Public Relations.

Report of the Board of Trustees

The Secretary presented the report of the Board of Trustees, which was referred to the Reference Committee on the Reports of Board of Trustees and Secretary.

Good Wishes and Good Cheer to Ill Confrères

Dr. Albert E. Bulson, Indiana, reported that Dr. Hobart Amory Hare, Philadelphia, and Dr. John M. Dodson, director of the Bureau of Health and Public Instruction, were seriously ill. Dr. Holman Taylor, Texas, reported the serious illness of the wife of Dr. W. G. Ricker, Vermont.

Dr. Bulson moved that the Secretary be instructed to send telegrams of good wishes and good cheer to Drs. Hare, Dodson and Ricker. Dr. A. T. McCormack, Kentucky, seconded the motion and it was carried.

Report of Judicial Council

Dr. George Edward Follansbee, Chairman, presented the report of the Judicial Council, which was referred to the Reference Committee on Rules and Order of Business.

Report of the Council on Medical Education and Hospitals

Dr. Ray Lyman Wilbur, Chairman, presented the report of the Council on Medical Education and Hospitals. He also introduced the following resolutions:

RESOLUTION ON INTERN TRAINING

Resolved, That acceptable medical colleges should assist all of their students in obtaining intern training, and that after the academic year 1933-1934 all acceptable colleges complete arrangements so that each annual announcement will contain a record of the hospital training of the graduating class of the year before.

RESOLUTION ON CLASSIFICATION OF FOREIGN MEDICAL SCHOOLS

On account of the increasing number of graduates of foreign medical schools applying for licensure in this country, notably in the state of New York, the Council has been petitioned by the state of New York and also by the state of West Virginia to draw up a list of foreign medical colleges, which may be considered acceptable, or as giving the equivalent in medical education to that furnished by American schools. The Council accordingly passed the following resolution:

Resolved, That the Council on Medical Education and Hospitals make a classification of foreign medical schools where students of American citizenship are in attendance, along the lines applied in the classification of American Medical Colleges.

RESOLUTION ON GRADUATION OF UNQUALIFIED STUDENTS

WHEREAS, The recently published survey conducted by this council discloses a wide discrepancy in the policy of approved medical colleges toward students repeating the work of the previous year, and

WHEREAS, Superficial investigation of the history of a few said students and one notably liberal institution reveals obvious unfitness in the former, and undoubtedly low standards of teaching in the latter, and

WHEREAS, Medical schools regularly permitting more than an occasional student to repeat his previous year's work are frequently contributors to the problems facing this council which originate in commercialism, therefore, be it

Resolved, That the Council on Medical Education and Hospitals pursue to its logical conclusion the investigations begun in regard to "repeaters" among medical students to the end that unqualified students may not be graduated, and commercially tainted medical schools may thereby be disorganized.

The report and the resolutions were referred to the Reference Committee on Medical Education.

Report of the Council on Scientific Assembly

Dr. John Edward Lane, Chairman, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work.

NEW BUSINESS

Resolutions on the Name of the Committee on the Costs of Medical Care

Dr. Albert Soiland, California, presented the following resolutions with reference to changing the name of the Committee on the Costs of Medical Care, which were referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The Committee on the Costs of Medical Care was called into being to study the social and economic problems arising from the increasing costs of illness, and

WHEREAS, The interest of the public is increasing, largely because of the increasing number of articles in lay periodicals, the tone of most of which is derogatory to the medical profession; and

WHEREAS, The public is also becoming increasingly interested in the work of the Committee on the Costs of Medical Care, because of the publicity given its studies and reports, which publicity is expected to increase greatly during the remainder of the term of the studies; and

WHEREAS, These studies, which we heartily endorse, are understood to include not only the cost of medical care but also the cost of dental care, of hospital, of nursing care, of drugs, and even of burial; and

WHEREAS, These and other studies have shown that the cost of medical care comprises one third or less of the actual cost of illness; and

WHEREAS, Because of the name of this committee there is being fostered in the minds of the public the idea that physicians, either directly or indirectly, are chiefly if not altogether responsible for the high and increasing costs of illness; which idea we believe to be resulting in far-reaching and irreparable damage to the prestige of the medical profession; and

WHEREAS, The Committee on the Costs of Medical Care was "organized to study the economic aspect of the care and prevention of illness"; now, therefore, be it

Resolved, That the Council of the California Medical Association go on record as being of the opinion that in justice to the physicians of the nation the name of this committee should, before issuance of further publications, be changed to eliminate the term "medical care," substituting therefor some such term as "illness," or "the care and prevention of illness," as the committee may see fit; and be it further

Resolved, That we respectfully petition the chairman and members of that committee to take action to this end immediately.

Resolution Dealing with Delegates' Credentials

Dr. Albert Soiland, California, presented the following resolution dealing with the provisions of the Constitution and By-Laws with respect to credentials, which was referred to the Reference Committee on Rules and Order of Business:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that those provisions of the Constitution and By-Laws of the American Medical Association dealing with the credentials of constituent state associations shall be so construed by the Reference Committee on Credentials that, when a constituent state association reports that one of its delegates and his respective alternate are both unable to attend a specified annual session of the American Medical Association in which one of them could have functioned as a delegate, under such conditions (provided the constituted body or council of such a constituent state association is authorized by its state constitution and by-laws to act for the state association and its house of delegates), when such authorized state body has duly elected others of its members to fill the vacancies caused by the absence of both a delegate and his respective alternate, such a duly elected substitute delegate or his duly elected substitute alternate who presents proper credentials shall be eligible to regular membership in the House of Delegates of the American Medical Association for such a specified annual session.

Resolution on Discrimination Abroad Against Graduates of American Medical Colleges

Dr. Samuel J. Kopetzky, New York, presented the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, Evidence is available to indicate that discrimination is being exercised against graduates of American medical colleges in various foreign countries relative to the granting of licensure by reciprocity or permission to practice medicine under conditions which pertain relative to graduates of local medical schools, and

WHEREAS, Such discrimination is unwarranted in view of the fact that the American medical schools from which such men have graduated maintain standards fully equal to, if not surpassing, some of the institutions graduating physicians in the countries concerned; therefore be it

Resolved, That the attention of the House of Delegates be brought to this situation, and that the Council on Medical Education and Hospitals of the American Medical Association be instructed by the Board of Trustees to make a survey of the conditions existing, and undertake by bringing the matter to the attention of the appropriate authorities in the countries in which such discrimination exists to secure for American physicians the privileges granted to physicians coming from those countries to the United States.

Resolutions on Appointment of a Commission on Qualifications for Specialists

Dr. Carl F. Moll, Michigan, presented the following resolutions which were referred to the Reference Committee on Medical Education:

WHEREAS, The advancement of medical science through the results of research and practical experience has stimulated many physicians to confine their professional activities to limited and special fields of medical practice, and

WHEREAS, There has thus been created a class of specialists in medicine, and

WHEREAS, There appears to be a growing tendency on the part of physicians who are not properly qualified to hold themselves out as specialists; therefore be it

Resolved, That the Speaker of the House of Delegates shall appoint, by and with the advice of the President and the Board of Trustees, a Commission on Qualifications for Specialists, composed of nine members; that said commission shall undertake to define the qualifications that should be required of the individual physician who desires to limit his practice to any special field and to be known as a specialist, and that in arriving at such definition the Commission on Qualifications for Specialists should give consideration to questions of education, training and clinical experience; and be it further

Resolved, That this commission shall give consideration to the present status of specialization in medicine, and shall define the various specialties which in the opinion of the commission may be considered as necessary for the best interests of the public and of scientific medicine; and be it further

Resolved, That the Council on Medical Education and Hospitals be directed to render its assistance to the Commission on Qualifications for Specialists, and that the Board of Trustees be requested to provide necessary clerical assistance; and be it further

Resolved, That this commission shall report to the House of Delegates concerning the advisability of the possible enactment of legislation whereby state boards of medical examiners or other bodies charged with the administration of practice acts may be empowered to issue special licenses to physicians who wish to qualify and practice as specialists; and be it further

Resolved, That the report of this commission and its recommendations shall be submitted to the House of Delegates, through its secretary, at the next annual session.

Resolution on the Dissemination of Public Information

Dr. Carl F. Moll, Michigan, presented the following resolutions, which were referred to the Reference Committee on Executive Session:

WHEREAS, The American Medical Association, including its county and state associations, is the one democratic medical organization in the United States, speaking through regularly elected delegates representing more than 100,000 physicians, and

WHEREAS, From time to time, various self-constituted medical organizations, representing various specialties in medical science, or small groups of physicians banded together for some specific purpose, have issued opinions on public policy, indicating that these opinions purport to be the voice of the medical profession of this country, therefore, be it

Resolved, By the House of Delegates of the American Medical Association, that members and Fellows of this organization, desiring to bring a point of view before the medical profession and the public, initiate such actions in the county, state and national representative bodies of the American Medical Association, or through its scientific sections; and be it further

Resolved, That the periodicals of the Association and its Bureau of Health and Public Instruction endeavor to inform the press and other means of dissemination of public information that the American Medical Association is the largest body of physicians banded together in this

country for the advancement of medical science and for the benefit of the public, that it is the only body democratically organized, wherein every member has through his county society or through his regularly elected delegate in state and national houses of delegates full representation and a voice in its councils.

Proposed Amendment to the By-Laws

Dr. Edward B. Heckel, Chairman of the Board of Trustees, presented the following proposed amendment to chapter V, section 6, of the By-Laws, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

Sec. 6. TREASURER.—The Treasurer shall be the custodian of all moneys, securities and deeds belonging to the Association which may come into his possession, and shall hold the same subject to the direction and disposition of the Board of Trustees; provided, however, that the Board of Trustees may select a bank or trust company to act as custodian in place of the Treasurer of all or any part of the investments and securities owned by the Association and to act as the agent of the Association in collecting the income therefrom. The Board of Trustees may from time to time change such custodian as it may deem best for the interests of the Association. The Treasurer shall give to the Board of Trustees a suitable bond for the faithful performance of his trust, and shall receive for his service a salary to be fixed by the Board of Trustees.

Resolution to Be Presented in Executive Session

Dr. Daniel S. Dougherty, New York, asked permission to present a resolution in executive session, and the Speaker announced that it would be automatically referred to the Reference Committee on Executive Session, and would be taken up as an order of business at the executive session, Tuesday, June 9.

Resolution Proposing Change in Name of Section on Diseases of Children

Dr. I. A. Abt, Section on Diseases of Children, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work:

At the business meeting of the Section on Diseases of Children, held Friday morning, June 27, 1930, the following resolution was presented by the executive committee of the section:

Resolved, That it be recommended that the name of the section be changed from Section on Diseases of Children to Section on Pediatrics. This resolution was approved and passed by unanimous vote. The House of Delegates is requested to change the name of the section by appropriate enactment.

Resolution on the Policy of Rendering Medical and Hospital Benefits to Veterans with Non-Service Connected Disabilities

Dr. H. H. Shoulders, Tennessee, presented the following resolutions, which were referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The federal government has inaugurated the policy of rendering medical and hospital benefits to veterans of the World War with non-service connected disabilities; and

WHEREAS, This policy was inaugurated over the opposition of the American Medical Association; and

WHEREAS, The policy now in force, if carried to its logical conclusion, involves the construction, the staffing, and the maintenance of a sufficient number of hospitals to accommodate the hospital needs of all the veterans of the World War; and

WHEREAS, Such a policy places the federal government in unnecessary and unjust competition with the civilian hospitals and the medical profession of the United States; and

WHEREAS, The present policy is of unequal benefit to veterans by reason of the fact that many disabled veterans cannot (for one reason or another) avail themselves of the benefit; therefore be it

Resolved, That the House of Delegates of the American Medical Association petition the Congress of the United States and the American Legion to abandon the policy of rendering hospital and medical benefits to veterans of the World War with non-service connected disability, and substitute therefor a plan of disability insurance benefits with the following provisions:

First, the creation of a Bureau of Disability insurance in the Veterans' Bureaus as now constituted.

Second, the issuance of a disability insurance policy to each veteran with a disability benefit clause, as follows:

(*a*) The payment of a weekly cash benefit during a period of total disability, and

(*b*) The payment of liberal hospital benefit sufficient to cover the hospital expenses of a veteran during a period of hospitalization for any disability. Such benefits to be paid to a veteran on satisfactory proof of total disability, and

(*c*) Such other provisions as are necessary for the proper administration of the act.

Be it further

Resolved, That the proper officers of this association be instructed to approach the officers of the American Legion with the view to securing the adoption of the policy above set out as a part of the legislative program of the American Legion, and be it further

Resolved, That each state medical association be requested to form a committee whose duty it will be to approach the state and local Legion posts throughout the country with a view to securing the adoption of this program by them.

Resolution Urging the Woman's Auxiliary to Promote the Distribution of Hygeia

Dr. C. S. Gorsline, Michigan, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health:

WHEREAS, The periodical HYGEIA, the health magazine published by the American Medical Association, is the only authentic health periodical available in this country, and

WHEREAS, This periodical was established by the Board of Trustees on recommendation of the House of Delegates to be the official voice of the American Medical Association in educating the public in matters of health, and

WHEREAS, It is the best medium for reaching the teachers of the young, and the pupils in schools throughout the country, informing them of the progress of medical science and of scientific means for the prevention of diseases; therefore be it

Resolved, That the House of Delegates urge the Woman's Auxiliary of the American Medical Association, including the county, state and national organizations, to recognize as one of its chief activities, if not its primary function, to promote the distribution of this publication through parent-teachers' associations, boards of education and similar bodies interested in education.

Resolutions on Filling Out of Claim Proofs of Health and Accident Insurance Companies

Dr. J. D. Brook, Michigan, presented the following resolutions, which were referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The Michigan State Medical Society, through its Committee on Civic and Industrial Relations, has made a comprehensive study of the question of filling out claim proofs of health and accident insurance companies; that this study has extended over a period of three years and has involved an extensive analysis of the subject, including a conference with representatives of several outstanding insurance companies; and that, as a result of such study and conference, the Michigan State Medical Society has adopted suitable resolutions providing for the charging of a fee to the insurance companies of not less than $2 for filling out each preliminary and final claim proof, and

WHEREAS, The Michigan State Medical Society, by its action in adopting such resolutions, has created the interest and favor of other state medical societies in the question, which equally affects every other state medical society; and that the Michigan State Medical Society has met with considerable opposition from the insurance companies, for the reason that they object strenuously to the plan, and point out that Michigan represents only a small section of the nation and should not undertake a project affecting the policy of all the insurance companies of the United States, and

WHEREAS, The rights and privileges of the individual physicians of the entire United States are involved and are being encroached on by the health and accident insurance companies, which are continuing to insist that the services of the physician in filling out claim proofs are part of the physician's professional obligation to his patient; that the insurance companies are unwilling to concede that the information given to them is for their own statistical use in properly adjusting claims; and that they are unwilling to pay the physician his fees; therefore be it

Resolved, That the House of Delegates of the American Medical Association concur with and approve the action of the Michigan State Medical Society in adopting resolutions providing for the charging of a fee of not less than $2 for each preliminary and final claim proof; and that the House of Delegates of the American Medical Association authorize its Speaker to appoint a committee to whom this problem shall be referred; and be it further

Resolved, That this committee be instructed to study the facts and factors involved and to formulate a national policy that will result in remunerating physicians and surgeons for their service to insurance companies, when rendering these reports that contain expert opinions and professional advice; and be it further

Resolved, That the committee of the Association shall make a full report and recommendation at the next annual meeting of the House of Delegates of the American Medical Association.

Resolution to Be Presented in Executive Session

Dr. Roland Hammond, Rhode Island, requested permission to present a resolution at the executive session, Tuesday, June 9, and the Speaker announced that, without objections, it would be first referred to the Reference Committee on Executive Session for their consideration.

The meeting adjourned at 12:30 p. m., to reconvene at 9:30 a. m. Tuesday, June 9.

Second Meeting — Tuesday Morning, June 9

The House of Delegates was called to order at 9:30 a. m. by the Speaker, Dr. F. C. Warnshuis.

It was moved by Dr. J. Newton Hunsberger, Pennsylvania, seconded by Dr. A. A. Ross, Texas, and carried, that the signed attendance slips of the individual delegates constitute the roll call of the House.

It was moved by Dr. A. E. Bulson, Indiana, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried, that the House dispense with the reading of the minutes.

Report of the Reference Committee on Credentials

Dr. J. D. Brook, Chairman, reported that 148 delegates had filed satisfactory credentials.

Dr. C. J. Amble, New Mexico, who had been appointed by his state society as an alternate, wished to be seated as a delegate, but as he had not been a Fellow for the preceding two years the Speaker ruled that he could not be seated.

On motions duly seconded and carried, the following, who had been properly certified as delegates or alternates, but who did not have their credentials, were seated: Dr. J. H. Font, Porto Rico; Dr. A. W. Hornbogen, Michigan, and Dr. Roy F. Forbes, Colorado.

After discussion concerning the number of missed, lost and imperfect credentials, the Speaker directed the Reference Committee on Credentials to present a resolution regarding the matter.

The Secretary read two telegrams, which had been received from Drs. Dodson and Ricker.

Congratulations to Massachusetts Medical Society

Dr. C. E. Mongan, Massachusetts, stated that the Massachusetts Medical Society was celebrating its one hundred and fiftieth birthday and moved that the Secretary be instructed to send a telegram of congratulation to that society. The motion was seconded by Dr. John E. Lane, Connecticut, and carried.

Report of Reference Committee on Legislation and Public Relations

Dr. Holman Taylor, Chairman, presented the following report:

1. Your Reference Committee on Legislation and Public Relations has had under consideration the resolutions offered by Dr. H. H. Shoulders, Tennessee, pertaining to medical and hospital benefits to veterans of the World War with non-service connected disabilities. The purpose of these resolutions and the plan advanced therein appeals to this committee as being in line with the heretofore expressed policies of the American Medical Association pertaining to such matters, in addition to which it has the advantage of offering something very definite for the consideration of all parties concerned. It is, therefore, recommended that the resolutions be adopted.

2. The resolution presented by Dr. Albert Soiland, California, providing for a change of name for the present well known Committee on the Costs of Medical Care, in the activities of which committee the American Medical Association is participating, has been referred to this committee and has been carefully considered. This committee finds itself entirely in sympathy with the resolution and the change of designation recommended therein, but because of the physical difficulties sure to be encountered in attempting to carry out the purposes of the resolution, it is felt that the matter should not be prosecuted further, at least on an official basis. It is therefore recommended that the resolution be not adopted.

3. The resolution presented by Dr. J. D. Brook, Michigan, published in the handbook for the House of Delegates, beginning on page 28, has been referred to this committee. The committee is in sympathy with the purpose of the resolution but feels that, in view of the fact that there is a standing committee which has to do with such matters, the Bureau of Medical Economics, the resolution should be referred to this bureau instead of a newly created committee. It is so recommended.

Fraternally submitted.

HOLMAN TAYLOR, Chairman.
GRANT C. MADILL. WELLS TEACHNOR, SR.
J. W. BURNS. H. H. SHOULDERS.

Dr. Taylor moved that the first section of the report, pertaining to the resolutions submitted by Dr. Shoulders relative to the policy of rendering medical and hospital benefits to veterans with non-service connected disabilities, be adopted. The motion was seconded by Dr. H. B. Everett, Tennessee, and carried after discussion by Drs. Donald Macrae, Jr., Iowa; H. H. Shoulders, Tennessee; H. M. Johnson, Minnesota, who suggested that the report be amended so that the American Hospital Association be invited to cooperate with this committee; J. Norman Henry, Pennsylvania; B. F. Bailey, Nebraska, and Holman Taylor, Texas.

On motion of Dr. Taylor, seconded by Dr. H. H. Shoulders, Tennessee, and carried, the second section of the report, relative to the name of the Committee on the Costs of Medical Care, was adopted.

Dr. Taylor moved that the third section of the report, dealing with the filling out of claim proofs of health and accident insurance companies, be adopted. The motion was seconded by Dr. George Edward Follansbee, Judicial Council, and carried.

On motion of Dr. Taylor, seconded by Dr. J. Newton Hunsberger, Pennsylvania, and carried, the report as a whole was adopted as amended.

Report of Reference Committee on Hygiene and Public Health

Dr. C. E. Mongan, Chairman, presented the following report and moved that it be adopted:

Your committee has considered the resolution offered by Dr. C. S. Gorsline, Michigan, and recommends the adoption of the following resolution:

WHEREAS, The periodical *Hygeia*, the health magazine published by the American Medical Association, is the only authentic health periodical available in this country; and

WHEREAS, This periodical was established by the Board of Trustees on recommendation of the House of Delegates to be the official voice of the American Medical Association in educating the public in matters of health; and

WHEREAS, It is the best medium for reaching the teachers of the young, and the pupils in schools throughout the country, informing them of the progress of medical science and of scientific means for the prevention of diseases; therefore be it

Resolved, That the House of Delegates urge the Woman's Auxiliary of the American Medical Association, including the county, state and national organizations, to recognize as one of its chief activities to promote the distribution of this publication through parent-teachers' associations, boards of education and similar bodies interested in education.

Respectfully submitted.

C. E. MONGAN, Chairman.
JAMES R. BLOSS.
DONALD MACRAE, JR.
J. H. CANNON.

The motion was seconded by Dr. Mather Pfeiffenberger, Illinois.

Dr. Holman Taylor, Texas, moved that the report be amended to include the recommendation that the resolution be referred to the Liaison Committee, notifying it of the action taken. The motion was seconded by Dr. William Kuykendall, Oregon, and adopted after discussion by Dr. A. T. McCormack, Kentucky, and Dr. Taylor.

After discussion by Drs. C. S. Gorsline, Michigan, A. E. Bulson, Indiana, J. Newton Hunsberger, Pennsylvania, A. T. McCormack, Kentucky, Horace Reed, Oklahoma, and G. Henry Mundt, Illinois, the report as amended was adopted.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. Charles Whalen, Chairman, presented the following report:

1. The statistical data relating to the medical population in the various states, and the relation of the same to the American Medical Association, should be a source of gratification to all who believe in organized medicine.

It is a pleasure to note that the membership in the Association has at last passed the one hundred thousand mark.

It is with great satisfaction that we note that progress is being made along the line of developing a unanimity of action between the constituent state medical association and the component county medical societies, but in some states it would be

well to encourage better supervision in the independent groups engaged in matters pertaining to public health and semipublic health activities.

Your committee feels that the time has arrived when the medical profession should direct all independent or extragovernmental or lay health groups.

We especially condemn the examination of pre-school children *en masse*, in clinics, and in health units and similar agencies. Such examinations cannot but be perfunctory, superficial and unsatisfactory to physician and child alike.

We congratulate the association on the manner in which its offices have been conducted during the past year by its able and efficient manager and Secretary, Dr. Olin West.

2. We fully appreciate the great amount of work being thrust on the Board of Trustees. In addition to the work in administering the affairs of the association, we note the increasing demands of the public in appeals for information and advice which the Trustees have been able to furnish through various councils and departments.

We believe that in the near future some of the burden now thrown on the Board of Trustees will need to be diverted to a separate bureau in order to meet increasing demand which the public is making on the Board.

We approve of the efforts of the Board of Trustees to conserve the resources of the Association and to confine the expenses to present-day needs.

We commend the Board of Trustees for the financial showing of the year as exemplified by the auditors' report.

We approve of the expressed desire of the Board of Trustees to acquire the land necessary for erection of a new, larger and more adaptable building to meet the growing demands of the Association. In view of the present economic conditions and the urgent needs of the Association, we believe that now is the opportune time to construct the new home.

We are gratified at the position attained by THE JOURNAL as the leader of medical publications, as well as the high standard of the special journals in their respective fields.

We particularly commend THE JOURNAL on its department of Queries and Minor Notes, which has met the hearty approval of the practitioners throughout the country.

We appreciate the work being accomplished by HYGEIA, especially in schools, and we feel that the Woman's Auxiliary is largely responsible for the rapidly increased circulation of HYGEIA.

We note with pleasure the demands for Association library and package library service. We believe that time and money are conserved in imparting the newest information regarding medicine in a concise and abbreviated form at slight cost. This service is not generally known throughout the country; as it becomes better known, it will be universally employed.

We endorse the work of the various councils as outlined in the report, and especially the new department known as the Committee on Foods. The findings of this committee now available will be of valuable aid to both the profession and the public.

We approve of that part of the report of the Trustees advocating the education of the public on all matters pertaining to health and disease through radio talks, properly supervised, lay magazine articles and public lectures.

We especially commend the Bureau of Legal Medicine and Legislation in reference to national legislation in connection with the Jones bill (offspring of the Sheppard-Towner Maternity and Infancy Act), the narcotic legislation, the World War Veterans' legislation, the many bills introduced intended to create federal subsidies, and the government control of individual activities in the several states.

We note with pride the increasing importance of the annual Scientific Exhibit, and we recommend that it be continued and expanded to the highest possible degree.

We anticipate substantial contributions from the newly created Bureau of Medical Economics. The possible benefits to the profession from constructive activities in this bureau should prove invaluable.

In reference to the care of the World War Veterans, your committee suggests that the House of Delegates go on record as being opposed unalterably to giving free medical and surgical care to those suffering from injury or disease of nonservice origin.

The report of the Trustees as a whole is excellent, and reflects the decided progress of the Association's affairs.

Your committee desires to express its realization of the immense amount of work entailed, and its appreciation of the worth-while labors of the Board of Trustees in connection with the affairs of the organization.

Respectfully submitted.

C. J. WHALEN, Chairman.
J. F. HAGERTY.
WILLIAM KUYKENDALL.
J. N. HUNSBERGER.
E. F. CODY.

On motion of Dr. Whalen, seconded and carried, section 1 of the report, referring to the report of the Secretary, was adopted, with the exception of the paragraph referring to the examination of pre-school children, which was recommitted to the committee after discussion by Drs. A. T. McCormack, Kentucky, G. Henry Mundt, Illinois, J. N. Baker, Alabama, S. H. Osborn, Section on Preventive and Industrial Medicine and Public Health, I. A. Abt, Section on Diseases of Children, Howard C. Frontz, Pennsylvania, Daniel S. Daugherty, New York, James E. Sadlier, New York, and C. M. Rosser, Texas.

On motion of Dr. Whalen, duly seconded and carried, section 2 of the report was adopted.

On motion of Dr. A. J. Crowell, North Carolina, duly seconded and carried, the report of the committee, with the exception of the part that was recommitted, was adopted as a whole.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, reported that Dr. G. M. Street, Mississippi, was designated by telegram to act as alternate from that state. The Speaker announced that in order to seat Dr. Street it would be necessary to suspend the rules.

Dr. J. N. McCormack, Kentucky, moved that the rules be suspended. The motion was seconded by Dr. H. B. Everett, Tennessee, but was lost.

Report of Reference Committee on Reports of Officers

Dr. W. F. Braasch, Chairman, presented the following report:

1. Your Reference Committee has carefully considered the proposals and recommendations offered by President Morgan.

In view of the ever increasing activities of the Association and the exacting work involved, we particularly endorse the suggestion made that the Secretary and General Manager, the Editor, and the director of the Bureau of Legal Medicine and Legislation should each be provided with carefully selected assistants or, what might be more properly called, "understudies." By this means we may hope to lift the burden of too much detail and thus conserve the energies and time of these three important officials. It would also tend to preserve the continuity of policy and the splendid efficiency now in evidence, in case of enforced absence by illness or accident.

The question of an honorarium to be given the President and the President-Elect, in lieu of the present system of reimbursement for all legitimate expenses, occurring while on official duty, was seriously debated. The establishment of a fixed amount does not appear entirely satisfactory in that occasions may arise when this stipend might prove inappropriate or even inadequate to meet the exigencies of official activities.

The committee, however, is sympathetic with the idea that the presidency should not entail too great a financial sacrifice and we look with confidence to the Board of Trustees to provide adequate compensation for all actual expenses incurred.

Your committee considered the conclusions of the President in regard to the proposed removal of the Association headquarters to the city of Washington. This step is of such crucial importance to the future of our association that it would seem advisable that all the facts involved should first be assembled and carefully surveyed. This information might well be made available to the members of the House of Delegates for their consideration before any definite decision is made.

Your committee desires to emphasize the proposal of establishing a permanent office in the city of Washington to facilitate the work of the Bureau of Legal Medicine and Legislation.

The various comments and recommendations contained in the President's address indicate a clear grasp of the many problems involved and a comprehensive understanding of the important needs of the Association.

2. In considering the address of the President-Elect, we were impressed with the enthusiasm manifest at the moment of entering on presidential responsibilities and duties. His remarks were characterized by a simplicity and a directness of approach to the various problems which promises well for the coming year. He calls attention to the desirability of expediting the erection of a new headquarters building, suitable to the increased demands and activities of the Association. We are credibly informed that the Board of Trustees shares in this desire and is endeavoring to devise ways and means to that end.

The recommendations regarding problems of medical education deserve careful consideration, especially the proposal that the subject of medical ethics should be given a prominent place in the undergraduate curriculum.

We concur in the proposal to establish clinical programs in local, state and national gatherings. As suggested, it might be well to consider the advisability of the American Medical Association directly sponsoring district meetings of this type.

We are heartily in sympathy with the suggestion that the medical profession, as a whole and individually, should take an active interest in lay movements directed toward health matters.

We would especially endorse the recommendation that hospital management should be largely under the control of the medical staff.

We recommend the suggestion that state committees be established whose duties are to keep their legislators, both state and national, properly informed on matters pertaining to medicine.

3. In his usual engaging and convincing manner, the Speaker prefaces his report by stating once more the opportunities enjoyed by all the Delegates for free and untrammeled speech and exchange of ideas.

We heartily concur, and feel this is eminently in keeping not only with the character of our Speaker but with the spirit of this community which professes fundamental belief in brotherly love and which, in fact, claims to be the very cradle of liberty and freedom of speech.

We approve the recommendation offered to overcome acoustic difficulties by means of amplifiers and a reading clerk.

Also, we approve the suggestion of holding at least one executive session during the annual meeting.

Your committee regrets that it is not within its province, as a reference committee, to express our appreciation of the uniform courtesy extended to all members, and of the efficient manner in which the business of the House of Delegates is conducted by our Speaker.

Respectfully submitted.

W. F. BRAASCH, Chairman.
ARTHUR W. BOOTH.
SEALE HARRIS.
H. C. MACATEE.
C. T. PIGOT.

Dr. Braasch moved that section 1 of the report, dealing with the address of the President, be adopted. The motion was seconded by Dr. Arthur T. McCormack, Kentucky, and carried, after discussion by Drs. Albert E. Bulson, Indiana, Olin West, Secretary, R. W. Fouts, Nebraska, Isaac A. Abt, Section on Diseases of Children, William H. Mayer, Pennsylvania, C. B. Wright, Minnesota, A. J. Crowell, North Carolina, and W. F. Braasch.

On motion of Dr. Braasch, seconded by Dr. Arthur T. McCormack, Kentucky, and carried, the second section of the report dealing with the address of the President-Elect, was adopted, after discussion by Dr. Arthur J. Bedell, New York.

The Vice Speaker, Dr. Albert E. Bulson, took the chair, and on motion of Dr. Braasch, seconded by Dr. Arthur T. McCormack, Kentucky, and carried, the third section of the report was adopted.

Dr. Braasch moved the adoption of the report of the committee as a whole. The motion was seconded by Dr. Arthur T. McCormack, Kentucky, and carried.

Report of Reference Committee on Medical Education

The Speaker resumed the chair.

Dr. Van Etten, Chairman, presented the following report:

1. Considering the report of the Council on Medical Education and Hospitals, your reference committee commends the matter and manner of the report on medical education, osteopathic schools, medical licensure, medical colleges, essentials of acceptable medical colleges, the emphasis on the value of premedical courses in accredited professional colleges, the curriculum and faculty.

2. In regard to the report on clinical facilities and instruction on page 108 of the handbook, your committee approves of the ideals there presented but feels that colleges lacking entire control or ownership of hospitals should have affiliation with general hospitals, so that their students may come in contact with adequate clinical material under the supervision of the attending staff and your committee advocates the employment of existing municipal or state hospitals for teaching purposes.

3. Your committee commends the interesting report on the development of hospitals and the employment of their facilities by an increasing number of physicians, nearly 100,000, a number nearly equaling the membership of the American Medical Association.

4. The progress report under the heading of Hospitals for Nervous and Mental Diseases, requires special attention and special emphasis on the summarized points:

1. Medical students and physicians need more adequate training in psychiatry.

2. There should be interns in every hospital for the care of the insane. The presence of the inquiring student would do more to advance pathology, increase autopsies and develop research in our mental hospitals than any other factor.

3. More of the research energy of the medical profession should be diverted into the difficult fields of psychology and psychiatry.

4. Education of the people so that they will view mental diseases as they do other diseases is important.

5. The handling and care of the mentally ill should be dealt with along medical rather than legal lines.

5. Your committee approves of the report on clinical pathologic and radiologic laboratories.

6. Your committee notes that the demand for interns exceeds the annual number of graduates by about 1,000, and it is the sense of this committee that medical schools should promote the study of medicine by making efforts to secure internships in approved hospitals for all their graduates and should systematically urge the importance of these opportunities for study on all their students.

7. Your committee recommends the adoption of the resolution on intern training:

Resolved, That acceptable medical colleges should assist all of their students in obtaining intern training, and that after the academic year 1933-1934, all acceptable colleges complete arrangements so that each annual announcement will contain a record of the hospital training of the graduating class of the year before.

8. Your committee recommends the adoption of the resolution on classification of foreign medical schools:

On account of the increasing number of graduates of foreign medical schools applying for licensure in this country, notably in the state of New York, the Council has been petitioned by the state of New York and also by the state of West Virginia to draw up a list of foreign medical colleges, which may be considered acceptable, or as giving the equivalent in medical education to that furnished by American schools. The Council accordingly passed the following resolution:

Resolved, That the Council on Medical Education and Hospitals make a classification of foreign medical schools where students of American citizenship are in attendance, along the lines applied in the classification of American medical colleges.

9. Your committee recommends the adoption of the resolution on graduation of unqualified students:

WHEREAS, The recently published survey conducted by this council discloses a wide discrepancy in the policy of approved medical colleges toward students repeating the work of the previous year, and

WHEREAS, Superficial investigation of the history of a few said students and one notably liberal institution reveals obvious unfitness in the former, and undoubtedly low standards of teaching in the latter, and

WHEREAS, Medical schools regularly permitting more than an occasional student to repeat his previous year's work are frequently contributors to the problems facing this council which originate in commercialism, therefore, be it

Resolved, That the Council on Medical Education and Hospitals pursue to its logical conclusion the investigations begun in regard to "repeaters" among medical students to the end that unqualified students may not be graduated and commercially tainted medical schools may thereby be disorganized.

10. Your reference committee approves the following resolution introduced by Dr. Samuel J. Kopetzky, New York, and recommends its adoption:

WHEREAS, Evidence is available to indicate that discrimination is being exercised against graduates of American medical colleges in various foreign countries relative to the granting of licensure by reciprocity or permission to practice medicine under conditions which pertain relative to graduates of local medical schools, and

WHEREAS, Such discrimination is unwarranted in view of the fact that the American medical schools from which such men have graduated maintain standards fully equal to, if not surpassing, some of the institutions graduating physicians in the countries concerned; therefore be it

Resolved, That the attention of the House of Delegates be brought to this situation, and that the Council on Medical Education and Hospitals of the American Medical Association be instructed by the Board of Trustees to make a survey of the conditions existing, and undertake by bringing the matter to the attention of the appropriate authorities in the countries in which such discrimination exists to secure for American physicians the privileges granted to physicians coming from those countries to the United States.

11. In regard to the resolutions introduced by Dr. Carl F. Moll, Michigan, seeking definition of the qualifications of those physicians who hold themselves out as specialists, and consideration of the present status of specialization in medicine, your reference committee is in entire sympathy with the spirit of these resolutions, and after careful study of them, and after thoughtful consideration of reports presented to the committee by representative otolaryngologists, ophthalmologists, dermatologists and abdominal surgeons who appeared before the committee, your committee recommends that the Council on Medical Education and Hospitals be requested to investigate the entire subject and to make recommendations looking to the establishment of proper qualifications of physicians who shall engage in special practice, and that the report of the Council and its recommendations be submitted to the House of Delegates as soon as practicable.

Respectfully submitted.

N. B. VAN ETTEN, Chairman.
JOHN O. POLAK.
WILLIAM ALLEN PUSEY.
IRVIN ABELL.
H. G. STETSON.

On motions of Dr. Van Etten, duly seconded and carried, the first seven sections of the report were adopted.

The resolution on intern training was adopted on motion of Dr. Van Etten, seconded by Dr. L. N. Grosvenor, South Dakota, and carried.

On motion of Dr. Van Etten, seconded by Dr. Arthur W. Booth, New York, and carried, the eighth section of the report, concerning the resolution on classification of foreign medical schools, was adopted.

On motion of Dr. Van Etten, seconded by Dr. P. W. Tomlinson, Delaware, and carried, the ninth section of the report, dealing with the graduation of unqualified students, was adopted.

Dr. Van Etten moved the adoption of the tenth section of the report, concerning the resolution on discrimination abroad against graduates of American medical colleges. The motion was seconded by Dr. Irving S. Ingber, California, and carried. Dr. Van Etten moved the adoption of the eleventh section of the report, referring to resolutions on the appointment of a commission on qualifications of specialists. The motion was seconded by Dr. Arthur J. Bedell, New York, and carried.

Dr. Van Etten moved the adoption of the report of the committee as a whole. The motion was seconded by Dr. Arthur J. Bedell, New York, and carried.

Report of Reference Committee on Sections and Section Work

Dr. Frank W. Cregor, Chairman, presented the following report:

1. Your committee, to which was referred the report of the Council on Scientific Assembly, has considered the details of the summary, submitted by this active, energetic and competent council, and approves of each effort recorded.

The assignments of the section sessions meet with universal approval.

The clinical lectures have grown to be a vital part of the scientific program, and your reference committee expresses its admiration for the excellent work of those in charge of the selection of topics and speakers.

The Scientific Exhibit is a marvel of correlated up-to-date, easily assimilated, highly technical information, to which your committee directs special attention and commendation.

Your committee believes that it is inadvisable to discuss social and economic phases of medicine in an open general meeting to be held at the annual session. We therefore register our disapproval and recommend that the suggested innovation be not adopted.

2. Your committee has considered the resolution introduced by Dr. Isaac A. Abt, Delegate from the Section on Diseases of Children, which provided for the change of the name of his section. We recommend that the name of the Section on Diseases of Children be changed to the Section on Pediatrics.

The first section of the report was adopted on motion of Dr. Cregor, seconded by Dr. Arthur J. Bedell, New York, and carried.

The second section of the report, concerning the resolution introduced by Dr. Abt, was adopted on motion of Dr. Cregor, seconded by Dr. Isaac A. Abt, Section on Diseases of Children, and carried.

Dr. Cregor moved the adoption of the report of the committee as a whole. The motion was seconded by Dr. H. B. Everett, Tennessee, and carried.

Reference Committee on Amendments to Constitution and By-Laws

Dr. E. C. Thrash, Chairman, presented the following report:

The Board of Trustees recommends to the House of Delegates that section 6 of chapter V of the By-Laws be amended to read as follows:

SEC. 6. TREASURER.—The Treasurer shall be the custodian of all moneys, securities and deeds belonging to the Association which may come into his possession, and shall hold the same subject to the direction and disposition of the Board of Trustees; provided, however, that the Board of Trustees may select a bank or trust company to act as custodian in place of the Treasurer of all or any part of the investments and securities owned by the Association and to act as the agent of the Association in collecting the income therefrom. The Board of Trustees may from time to time change such custodian as it may deem best for the interests of the Association. The Treasurer shall give to the Board of Trustees a suitable bond for the faithful performance of his trust, and shall receive for his service a salary to be fixed by the Board of Trustees.

Your reference committee recommends the adoption of this amendment.

E. C. THRASH, Chairman.
J. R. KEVIN.
J. F. BURNHAM.
J. W. AMESSE.
D. E. SULLIVAN.

On motion of Dr. Thrash, seconded by Dr. L. N. Grosvenor, South Dakota, and carried, this portion of the report of the committee was adopted, after discussion by Dr. B. F. Bailey, Nebraska.

On motion of Dr. Thrash, seconded by Dr. Alonzo A. Ross, Texas, and carried, the amendment to the By-Laws was adopted, after discussion by Dr. B. F. Bailey, Nebraska, and Dr. Olin West, Secretary.

Dr. Thrash read the majority report concerning the resolution presented by Dr. Sullivan and moved its adoption:

MAJORITY REPORT

Dr. D. E. Sullivan, New Hampshire, has submitted a resolution to change the Constitution so that section 2 of article V shall read as follows:

The House of Delegates is composed of delegates elected by the constituent associations and by the sections of the Scientific Assembly, and of delegates from the medical departments of the Army and the Navy and the Public Health Service and Veterans' Bureau appointed by the Surgeon General of the respective departments and by the medical director of the Veterans' Bureau. The Trustees, the ex-Presidents of the Association and the members of the several councils shall be ex-officio members of the House of Delegates without the right to vote, provided that members of the Councils who are also elected delegates may exercise all of the rights of elected delegates.

Your committee recommends the adoption of this resolution by a vote of three for and one against. Dr. J. F. Burnham, Massachusetts, wishes to make a minority report. Those signing:

J. R. KEVIN.
J. W. AMESSE.
D. E. SULLIVAN.

The motion was seconded by Dr. Alonzo A. Ross, Texas.

Dr. J. F. Burnham, Massachusetts, presented the following report:

MINORITY REPORT

Until the personnel of the Veterans' Bureau can be shown to be Fellows of the American Medical Association, we cannot vote to recognize the bureau, and as members of the Reference Committee on Constitution and By-Laws, we recommend its rejection.

We further recommend that the records be investigated by the Secretary's office during the coming year.

E. C. THRASH, Chairman.
J. F. BURNHAM.

Dr. Burnham moved that the minority report be substituted for the majority report.

The motion was seconded by Dr. A. W. Hornbogen, Michigan.

After discussion by Drs. D. E. Sullivan, New Hampshire, and J. Richard Kevin, New York, Dr. Southgate Leigh, Virginia, moved that the majority and minority reports be laid on the table. The motion was seconded by Dr. R. W. Fouts, Nebraska, and carried.

Time of Thursday Meeting

Dr. G. Henry Mundt, Illinois, moved that the Thursday afternoon meeting be called to order at 1 o'clock in order that several delegates might leave on late afternoon trains. The motion was seconded by Dr. T. O. Freeman, Illinois, and carried.

NEW BUSINESS

Resolutions on Increasing Fellowship

Dr. Horace Reed, Oklahoma, presented the following resolutions, adopted by the House of Delegates of the Oklahoma State Medical Association, which were referred to the Judicial Council:

WHEREAS, All reputable, qualified and regularly licensed physicians are eligible to membership in the American Medical Association through its component county and state societies, and all qualified members of the American Medical Association in good standing are eligible to Fellowship in the American Medical Association; and,

WHEREAS, A fairly large percentage of the members of the county and state societies do not avail themselves of Fellowship in the American Medical Association, and the stated reasons therefor, while not being uniform, indicate that the parent organization is not attuned to the needs of this large group to make Fellowship a sufficiently worth-while matter; and,

WHEREAS, While recognizing the greatness of the organization of the American Medical Association, conceived and nurtured as it has been by the masters of the past, there is evidence that it is not sufficiently sensitive to the needs of the profession in these rapidly changing times; therefore be it

Resolved, That our duly elected delegates to the American Medical Association be requested to investigate the possibility of a need of some changes, or reorganization in our parent body, and if deemed advisable after due consideration, introduce and support such measures in the House of Delegates of the American Medical Association as is necessary to correct such deficiencies as now apparently exist.

In accordance with this mandate we submit the following resolutions:

Resolved, That an appropriate questionnaire be prepared by the Secretary-Manager of the Association and sent to a cross-section group of the members in such constituent associations who are not Fellows; and be it

Resolved, That the data obtained therefrom be analyzed by the officers of the Association or by an appointed committee to the end that the information obtained by the questionnaire may serve as a basis for taking steps which will result in increasing interest in the American Medical Association among those who now are indifferent or even antagonistic toward our great Association.

Respectfully submitted.

ALBERT COOK.
MCLEAN ROGERS.
HORACE REED.

Resolution Regarding Proposed Removal of Surgeon General's Library

Dr. C. B. Wright, Minnesota, presented the following resolution, which was referred to the Reference Committee on Medical Education:

It has been reported that plans are under way for the removal of the Surgeon General's Library from its present site in the city of Washington to a site in the suburbs, on the grounds of the Walter Reed Hospital. This would be a serious handicap to the medical profession of the entire United States who use the library and would handicap the medical officers of the Navy, the Public Health Service and the Veterans' Bureau in their use of it. No sufficient advantage could accrue to the relatively small number of medical officers at the Walter Reed Hospital and the Army Medical School sufficient to offset these disadvantages.

The fact that the Surgeon General's Library is for the use of the medical profession of the entire United States has been recognized by the Congress. It has been repeatedly recognized by the Surgeon General of the Army in the course of his testimony before congressional committees when he has urged appropriations for the library and appropriations have been made on the basis of those representations. In substance, the Surgeon General of the Army holds the library only as trustee for the medical profession generally.

The site to which it is proposed to move the library is from five to six miles, approximately, from the Union Station and the leading hotels in Washington. It can be reached by street cars in about forty minutes if fair connections are made, and more rapidly by taxi, of course, but at considerable cost and even then with substantial loss of time. The location of the library in the suburbs will make it more difficult, too, to keep it effectively open at night, if it should ever be determined to do so.

We approve of a new fire-proof building being constructed on a separate site, and as near as practicable to the Congressional Library.

From the foregoing facts, it seems clear that the proposed removal of the Surgeon General's Library into the suburbs of Washington, from its present readily accessible site, will be detrimental to the best interests of the medical profession of the United States. Therefore, the following resolution is offered:

Resolved, That the American Medical Association urgently appeal to the proper officers of the government to locate the proposed new building for the Surgeon General's Library somewhere in the vicinity of the Library of Congress where it will be easy of access to the medical profession in Washington and enable physicians from other parts of the country to reach it within a few minutes after their arrival at the Union Station in Washington.

Resolution for the Creation of Two New Sections in Place of the Section of Gastro-Enterology and Proctology

Dr. Martin E. Rehfuss, Section on Gastro-Enterology and Proctology, presented the following resolution, which was referred to the Reference Committee on Sections and Section Work:

WHEREAS, Ever since the establishment by the House of Delegates of the American Medical Association of the Section on Gastro-Enterology and Proctology, the interest in the work of the section has grown to such an extent that there has been an embarrassment of riches, so to speak, in the subjects presented by prospective readers of papers, and

WHEREAS, Gastro-enterology as a specialty is more particularly concerned with the treatment of diseases of the gastro-intestinal tract along nonsurgical lines, and

WHEREAS, Proctology includes more particularly the surgical treatment of diseases of the colon, rectum and anus, be it

Resolved, That the House of Delegates, in order to further the scientific work of these two specialties, create in place of the present Section on Gastro-Enterology and Proctology, two new sections, one a Section on Gastro-Enterology, and the other a Section on Proctology.

Respectfully submitted, with a request that this matter be referred to the Council on Scientific Assembly for consideration and report to the House of Delegates at its next annual session.

The Speaker announced that the House would go into executive session at 2 o'clock.

The House recessed at 12 noon, to meet at 1:30 p. m. to hear the reports from reference committees.

Third Meeting—Tuesday Afternoon, June 9

The meeting was called to order at 1:45 p. m. by the Speaker, Dr. F. C. Warnshuis.

Celebration of the Two Hundredth Anniversary of the Birth of George Washington

The Secretary read the following communication from the assocate director of the United States Commission for the Celebration of the Two Hundredth Anniversary of the Birth of George Washington, and resolutions that accompanied it:

My dear Dr. West:

For the consideration of your organization at its forthcoming convention the United States Commission for the Celebration of the Two Hundreth Anniversary of the Birth of George Washington requests your endorsement of the celebration in 1932 and invites your moral support and cooperation in doing your share to make it all that it should be.

An account of the origin, purpose and plan of the commission is submitted together with the personnel, which is headed by the President of the United States.

The commission is anxious to enlist the full collaboration of every organization, business house, church, school and home in this great republic and is relying upon the interest and support of your members, individually and collectively. In order that formal expression may be given your attitude in this matter, would it not be possible to secure passage by your organization of some such resolution as that enclosed?

Very truly yours,
SOL BLOOM, Associate Director.

WHEREAS, The Congress of the United States has created a commission to arrange a fitting nation-wide observance of the Two Hundredth Anniversary of the Birth of George Washington in 1932, and

WHEREAS, The commission so created, composed of the President of the United States, the Vice President of the United States, the Speaker of the House of Representatives, four members of the United States Senate, four members of the House of Representatives, and eight citizens appointed by the President of the United States, is charged with the duty of planning and directing the celebration, and

WHEREAS, The high purpose of the event is to commemorate the life, character and achievements of the most illustrious citizen of our republic and to give every man, woman and child living under the Stars and Stripes an opportunity to take part in the celebration which will be outstanding in the world's history, and

WHEREAS, The United States George Washington Bicentennial Commission, desiring the full cooperation of the people in the United States, has extended a most cordial and urgent invitation to our organization to participate in the celebration, therefore be it

Resolved, That the ——— does hereby endorse the program of observance of the Two Hundredth Anniversary of the Birth of George Washington, to take place in 1932; accepts with appreciation the invitation of the George Washington Bicentennial Commission, and pledges this organization to extend earnest cooperation to the United States commission in all possible ways, so that future generations of American citizens may be inspired to live according to the example and precepts of Washington's exalted life and character, and thus perpetuate the American Republic, and be it further

Resolved, That this resolution be incorporated in the official proceedings of this meeting and that a copy thereof be transmitted to the United States George Washingon Bicentennial Commission, Washington, D. C.

Dr. Arthur W. Booth, New York, moved that the letter and resolutions be referred to the Board of Trustees, with power to act. The motion was seconded by Dr. C. S. Gorsline, Michigan, and carried.

Report of Reference Committee on Medical Education

Dr. N. B. Van Etten, Chairman, presented the following report:

In the matter of the plans for removal of the Surgeon General's Library from its present site in the city of Washington to a site in the suburbs on the grounds of the Walter Reed Hospital, it is reported that this would be a serious handicap to the medical profession of the entire United States who use the library and handicap the medical officers of the Navy, the Public Health Service, and the Veterans' Bureau in their use of it. No sufficient advantage could accrue to the relatively small number of medical officers at the Walter Reed Hospital, and the Army Medical School sufficient to offset these disadvantages.

The fact that the Surgeon General's Library is for the use of the medical profession of the entire United States has been recognized by the Congress. It has been repeatedly recognized by the Surgeon General of the Army, in the course of his testimony before congressional committees, when he has urged appropriations for the library, and appropriations have been made on the basis of those representations. In substance, the Surgeon General of the Army holds the library only as trustee for the medical profession generally.

The site to which it is proposed to move the library is from 5 to 6 miles from the Union Station and the leading hotels in Washington. The location of the library in the suburbs would make it difficult to keep it effectively open at night if it should ever be determined to do so. We approve of a new fire-proof building being constructed on a separate site and as near as practicable to the Congressional Library.

It seems clear that the proposed removal of the Surgeon General's Library into the suburbs of Washington, from its present readily accessible site, will be detrimental to the best interests of the medical profession of the United States. Therefore, the following resolution is offered:

Resolved, That the American Medical Association urgently appeals to the proper officers of the government to locate the proposed new building for the Surgeon General's Library somewhere in the vicinity of the Library of Congress where it will be easy of access to the medical profession in Washington and enable physicians from other parts of the country to reach it within a few minutes after their arrival at the Union Station in Washington.

Your reference committee sympathizes with these arguments, and approves the resolution.

N. B. VAN ETTEN, Chairman.
JOHN O. POLAK.
IRVIN ABELL.
H. G. STETSON.

Dr. Van Etten moved the adoption of the report. The motion was seconded by Dr. John O. Polak, Section on Obstetrics, Gynecology and Abdominal Surgery, and carried, after discussion by Dr. Thomas S. Cullen, Board of Trustees.

Report of Reference Committee on Reapportionment of Delegates

Dr. Olin West, chairman, presented the following report:

The present apportionment of delegates is on the basis of 1 delegate for each 775 members or fraction thereof. Each constituent association is represented by at least 1 delegate irrespective of the number of members.

The By-Laws specifically provide that the total membership of the House of Delegates shall not exceed 175. The total membership of the Association on April 1, as recorded in the office of the Secretary, was 99,964.

An apportionment on the basis of 1 delegate for each 775 members would produce a total of 176 delegates, 1 more than is permitted by the By-Laws.

On the basis of 1 delegate for each 800 members, the total membership of the House would be 173, which is the present membership. On this basis California would gain one delegate and New York would gain two delegates, while Kansas, Maine and Pennsylvania would each lose one delegate.

On the basis of 1 delegate for each 825 members, the total membership of the House would be 169. On this basis California and New York would each gain a delegate, while Illinois, Kansas, Maine, Oklahoma, Pennsylvania and Tennessee would each lose one.

The committee recommends that the apportionment of delegates for the next three years be made on the basis of 1 delegate for each 800 members. Each state medical association, irrespective of the number of members, no matter how small its membership may be, is entitled to one delegate. On this basis, the membership of the House will be continued at 173 members, as at present.

Respectfully submitted.

OLIN WEST, Chairman.
F. C. WARNSHUIS.
B. R. MCCLELLAN.
S. P. MENGEL.
J. F. SMITH.

Dr. W. H. Seemann, Louisiana, moved the adoption of the report. The motion was seconded by Dr. Frank W. Cregor, Section on Dermatology and Syphilology, and carried, after discussion by Dr. H. M. Johnson, Minnesota.

Bases of Appointment of Delegates

State	Number of Members	Bases of Apportionment and Number of Delegates Under Each 800	825
Alabama	1,672	3	3
Arizona	283	1	1
Arkansas	1,012	2	2
California	5,019	7	7
Colorado	1,114	2	2
Connecticut	1,396	2	2
Delaware	173	1	1
District of Columbia	645	1	1
Florida	1,033	2	2
Georgia	1,763	3	3
Idaho	165	1	1
Illinois	7,371	10	9
Indiana	2,775	4	4
Iowa	2,308	3	3
Kansas	1,537	2	2
Kentucky	1,866	3	3
Louisiana	1,296	2	2
Maine	742	1	1
Maryland	1,490	2	2
Massachusetts	4,671	6	6
Michigan	3,435	5	5
Minnesota	2,266	3	3
Mississippi	1,067	2	2
Missouri	3,361	5	5
Montana	325	1	1
Nebraska	1,196	2	2
Nevada	96	1	1
New Hampshire	485	1	1
New Jersey	2,807	4	4
New Mexico	226	1	1
New York	12,846	17	16
North Carolina	1,698	3	3
North Dakota	413	1	1
Ohio	5,547	7	7
Oklahoma	1,634	3	2
Oregon	685	1	1
Pennsylvania	7,973	10	10
Rhode Island	441	1	1
South Carolina	857	2	2
South Dakota	322	1	1
Tennessee	1,647	3	2
Texas	3,835	5	5
Utah	366	1	1
Vermont	343	1	1
Virginia	1,830	3	3
Washington	1,368	2	2
West Virginia	1,142	2	2
Wisconsin	2,203	3	3
Wyoming	153	1	1
Alaska	19	1	1
Hawaii	179	1	1
Isthmian Canal Zone	140	1	1
Philippine Islands	426	1	1
Porto Rico	302	1	1
U. S. Army	...	1	1
U. S. Navy	...	1	1
U. S. Public Health Service	...	1	1
1 for each Scientific Section	...	15	15
		173	169

The total voting membership of the House of Delegates shall not exceed 175.

Report of Reference Committee on Rules and Order of Business

Dr. Alexius McGlannan, Chairman, presented the following report:

1. Your committee recommends the adoption of the resolution dealing with delegates' credentials that was presented by Dr. Albert Soiland, California.

2. Your committee approves the decision of the Judicial Council in the matter of the collection and appropriation of physicians' fees by hospitals and recommends its universal adoption for the guidance of members of the Association.

3. Regarding hospital and health associations, including community hospitals, this is a subject of wide ramifications and this committee recommends that it be referred to the Judicial Council or some special committee for complete study and report at the next annual meeting.

4. Your committee endorses that part of the report which refers to studies in the field of corporation practice by the Bureau of Medical Economics.

Respectfully submitted.

ALEXIUS MCGLANNAN, Chairman.
A. C. MORGAN.
JOHN H. O'SHEA.
W. ALBERT COOK.

Dr. McGlannan moved the adoption of the first section of the report. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried, after discussion by Drs. J. D. Brook, Michigan, and Olin West, Secretary.

On motion of Dr. McGlannan, seconded by Dr. Frank W. Cregor, Section on Dermatology and Syphilology, and carried, the second section of the report was adopted.

Dr. McGlannan moved that the third section of the report, regarding hospital and health associations, including community hospitals, be adopted. The motion was seconded by Dr. Joseph F. Smith, Wisconsin, and carried.

On motion of Dr. McGlannan, seconded by Dr. Albert E. Bulson, Indiana, and carried, the report was adopted as a whole, including the last section.

Appreciation of the House for Flowers from Woman's Auxiliary

The Speaker announced that the flowers on the Speaker's table had been sent by the Woman's Auxiliary and instructed the Secretary to send to the Woman's Auxiliary the due appreciation of the House, and to make due record of that in the BULLETIN.

Report of Reference Committee on Reports of Board of Trustees and Secretary

Dr. C. J. Whalen, Chairman, presented the following report:

At the morning session, that portion of the report of the committee having to do with the Secretary's report, which read as follows, was referred back to the committee for further consideration:

We especially condemn the examination of pre-school children *en masse* in clinics, health units and similar agencies. Such examinations cannot be but perfunctory, superficial and unsatisfactory to physician and child alike.

The committee submits the following amendment:

We commend education of the public as to the necessity for medical supervision of the pre-school child by the family physician, and we insist that medical examination of each child should be thorough and individual.

Dr. Whalen moved the adoption of the amendment. The motion was seconded by Dr. John O. Polak, Section on Obstetrics, Gynecology and Abdominal Surgery, and carried.

Executive Session—Tuesday Afternoon, June 9

The House of Delegates was called to order at 2:10 p. m. by the Speaker, who ruled that the delegates; the officers of the Association, including the Board of Trustees, the ex-presidents of the Association and members of the respective standing councils or bureaus of the Association; and the full-time executive secretaries of state associations might remain. He appointed Dr. George A. Leitner, New York, and Dr. A. W. Hornbogen, Michigan, sergeants-at-arms for this session.

Report of the Committee on Legislative Activities

Dr. C. B. Wright, Chairman, presented the following report:

The first meeting of this committee was called on April 10, 1931, and organized for business. At this meeting were present the Executive Committee of the Board of Trustees, Dr. Woodward, Dr. West, Dr. Fishbein, Mr. Fesler, president-elect of the American Hospital Association, and four members of the committee—Dr. Cary, Dr. Upham, Dr. Brown and Dr. Wright. Various phases of medical legislation, both national and state, and their interrelationship, were discussed. It was decided to get some information as to how legislative work was handled by the various states.

To this end, a questionnaire was sent to the secretaries of all the state medical associations. Twenty replies were received up to May 15. A follow-up letter was then sent, which brought the replies up to thirty-six by June 2, and two more came in on June 6, and one more today. These replies have been carefully gone over and summarized.

The nine states not heard from are Connecticut, Maryland, Missouri, Nevada, North Carolina, Oklahoma, Oregon, Tennessee and Vermont.

Many of the states show by their reports evidence of great interest in this subject and have made suggestions that require

special comment. There were some excellent reports, and I would like to mention particularly the report of the secretary of the Indiana State Medical Association. He gave us in great detail their methods of organization and of cooperation with the Bureau of Legal Medicine and Legislation. They maintain close contact with members of Congress, have a strong tie-up with newspapers by a newspaper man who handles publicity, and keep in close contact with Dr. Woodward.

From the reports of Illinois, Pennsylvania, Texas, Wisconsin, Nebraska, Michigan, Ohio, Minnesota and other states one can see evidence of active and efficient work, both locally and in cooperation with the Bureau of Legal Medicine. They use different methods, but apparently all are efficient. A close study and summarization of these thirty-nine reports are of great interest, and these reports are accessible to any member of the House of Delegates who is interested.

There has been too short a time between the first meeting, April 10, and the present, to accomplish anything of much value. A study, however, of the replies from the secretaries of the state associations would indicate that:

1. The work of the Bureau of Legal Medicine and Legislation is greatly appreciated throughout the country.

2. Judging from the tone of the correspondence, and reading between the lines, one can safely draw the conclusion that a small number of states are vitally interested in and actively cooperating with the bureau in national legislation; and, on the other hand, many states are doing very little.

3. The general tone of the correspondence would indicate that there is a great willingness to cooperate more intensively than at present, and a feeling on the part of many that increased activity and cooperation in state legislation would be greatly welcomed.

4. There should be a permanent committee to keep the state societies in close contact with national affairs in advance of the meetings of Congress, and during congressional sessions, by meeting with the Bureau of Legal Medicine and Legislation, organizing the country into districts, and disseminating their information by local conference with the chairmen of legislative committees of the states in their districts. This method would seem to be much more efficient for proper understanding both of the activities of the Bureau of Legal Medicine and Legislation and of the point of view of the various organizations throughout the country on legislation which is proposed.

CONCLUSIONS

1. We would urge on the delegates the importance of stimulating interest in this subject in the various states.

2. We feel that the House of Delegates should be exceedingly careful to represent truly the point of view of the medical profession throughout the country on matters coming before Congress.

3. Legislative activity must be continuous, and it is impossible for the House of Delegates to meet and decide on legislative questions of which it knows practically nothing in advance, and of bills that may be Sheppard-Towner bills today and Cooper-Jones bills tomorrow.

Therefore, we recommend that a national committee be created to function continuously with the Board of Trustees and the Bureau of Legal Medicine.

Respectfully submitted.

C. B. WRIGHT, Chairman.
E. H. CARY.
J. H. J. UPHAM.
D. CHESTER BROWN.
THOMAS S. CULLEN.

Dr. Wright moved the adoption of the report. The motion was seconded by Dr. Carl F. Moll, Michigan, and carried, after discussion by Drs. Holman Taylor, Texas, Olin West, Secretary, C. B. Wright, Minnesota, and Southgate Leigh, Virginia.

Report of Reference Committee on Executive Session

1. The resolution offered by Dr. C. F. Moll, Michigan, reads as follows:

WHEREAS, The American Medical Association, including its county and state associations, is the one democratic medical organization in the United States speaking through regularly elected delegates representing more than 100,000 physicians; and

WHEREAS, From time to time, various self-constituted medical organizations, representing various specialties in medical science, or small groups of physicians banded together for some specific purpose, have issued opinions on public policy, indicating that these opinions purport to be the voice of the medical profession of this country; therefore be it

Resolved, By the House of Delegates of the American Medical Association that members and Fellows of this organization, desiring to bring a point of view before the medical profession and the public, initiate such actions in the county, state and national representative bodies of the American Medical Association, or through its scientific sections; and that the periodicals of the Association and its Bureau of Health and Public Instruction endeavor to inform the press and other means of dissemination of public information that the American Medical Assocition is the largest body of physicians banded together in this country for the advancement of medical science and for the benefit of the public, and that it is the only body democratically organized, wherein every member has through his county society or through his regularly elected delegate in state and national houses of delegates, full representation and a voice in its councils.

The committee has ascertained that the intent of this resolution is to urge on the membership of the American Medical Association the importance of initiating in county and state societies and in the House of Delegates of this Association resolutions on questions of medical economics and social relations, rather than in special societies of limited membership with a view to presenting to the public the opinion of organized medicine as a unit and to prevent the presentation of a divided opinion before legislators and the public in general.

In order to express this more fully and more definitely, the committee has rephrased the resolution and now offers it for your consideration in the following form:

WHEREAS, The American Medical Association, through its county and state organizations and through its House of Delegates, affords to each of its members representation whereby he may express his views, and, if approved, receive the support of organized medicine; and

WHEREAS, The American Medical Association is the largest body of physicians in the United States, representing every specialty, democratically organized, and including more than 100,000 physicians; and

WHEREAS, From time to time, members of the American Medical Association, holding membership in various medical societies, organized for scientific advancement, have initiated in such bodies resolutions defining medical policies and opinions on questions of medical economics and social relations; and

WHEREAS, Resolutions on such subjects adopted by such organizations are given wide publicity as representing the views of the American medical profession, notwithstanding the fact that such bodies are of limited membership and specialistic interest; therefore be it

Resolved, That the House of Delegates of the American Medical Association urge all members of the Association to initate such resolutions in their county or state societies or in the House of Delegates of the American Medical Association, and that an effort be made, through the periodicals of the Association, to inform the membership, and also all organs of public expression, that the American Medical Association is the one body, in organized medicine, entitled to speak for the vast majority of the physicians of this country.

2. Resolutions referred to the committee were presented by Dr. Roland Hammond, Rhode Island. These resolutions read as follows:

WHEREAS, The Congress has undertaken to fix the doses of wine and whisky and brandy by legislative fiat, thus taking over the functions of pharmacologist and physician; and

WHEREAS, The Volstead Act compels physicians to betray the confidences of their patients by keeping a record of their diseases and ailments for inspection by federal prohibition agents, thus violating the traditions of the medical profession, medical ethics and the laws of a number of states; and

WHEREAS, Relief from these conditions has been sought in the courts and has been denied by the United States Supreme Court; and

WHEREAS, The Wickersham Commission has unanimously made the recommendations:

"Removal of the causes of irritation and resentment on the part of the medical profession by: (*a*) doing away with the statutory fixing of the amount which may be prescribed and the number of prescriptions; (*b*) abolition of the requirement of specifying the ailment for which liquor is prescribed on a blank to go into the public files; (*c*) leaving as much as possible to regulations rather than fixing details by statute." Now, therefore, be it

Resolved, That the Rhode Island Medical Society hereby urges each of its members to demand of his senators and congressmen the repeal of those portions of the Volstead Act which substitute the fiat of Congress for the seasoned opinion of the medical profession, which rob the sick of their right to be healed of their diseases and ailments according to the recommendations of eminent medical authorities, and which deprive the physician of his right to the free exercise of his judgment in the practice of his profession; and be it further

Resolved, That the delegate of the Rhode Island Medical Society to the American Medical Association be, and hereby is, instructed to present this resolution to the House of Delegates of the American Medical Association at its next meeting for similar action.

Similar resolutions with practically the same diction, introduced by the New York delegation, were presented. They read:

WHEREAS, The Congress has undertaken to fix the doses of wine and whisky and brandy by legislative fiat, thus taking over the functions of pharmacologist and physician; and

WHEREAS, The Volstead Act compels physicians to betray the confidences of their patients by keeping a record of their diseases and ailments for inspection by federal prohibition agents, thus violating the traditions of the medical profession, medical ethics and the laws of a number of states; and

WHEREAS, Relief from these conditions has been sought in the courts and has been denied by the United States Supreme Court; and

WHEREAS, The Wickersham Commission has unanimously made the recommendations:

"Removal of the causes of irritation and resentment on the part of the medical profession by: (*a*) doing away with the statutory fixing of the amount which may be prescribed and the number of prescriptions; (*b*) abolition of the requirement of specifying the ailment for which liquor is prescribed on a blank to go into the public files; (*c*) leaving as much as possible to regulations rather than fixing details by statute." Now, therefore, be it

Resolved, That the American Medical Association formally expresses its disapproval of those portions of the Volstead Act which invade the right of the state of New York to regulate the practice of medicine within its own borders, and which deprive the physician of his right to the free exercise of his judgment in the practice of his profession; and be it further

Resolved, That the American Medical Association demand of Congress the repeal of said portions of the Volstead Act; and be it further

Resolved, That the American Medical Association urge each of its members to demand of his senators and congressmen the repeal of said portions of the Volstead Act; and be it further

Resolved, That the Secretary of the American Medical Association be, and hereby is, instructed to transmit a copy of these resolutions to each Senator and to each Representative in Congress.

The committee recommends that in accordance with previous action taken by the House of Delegates, which has not been modified in any way by any subsequent action, these resolutions be referred to the Board of Trustees for consideration through its regularly established Committee on Control of Medicinal Use of Liquor.

Respectfully submitted.

J. GURNEY TAYLOR, Chairman.
B. L. BRYANT.
ALBERT SOILAND.
SOUTHGATE LEIGH.
H. A. ROYSTER.

Dr. Taylor moved the adoption of the first section of the report, referring to the resolution presented by Dr. C. F. Moll, Michigan. The motion was seconded by Dr. B. F. Bailey, Nebraska, and carried after discussion by Dr. A. E. Bulson, Indiana, and Dr. F. C. Warnshuis, Speaker.

Dr. Taylor, after reading the resolutions introduced by Dr. Roland Hammond, Rhode Island, and those introduced by the New York delegation, read the following resolution, passed at the Washington session of the House of Delegates, in 1927:

Resolved, That the American Medical Association declares its adherence to the principle that legislative bodies composed of laymen should not enact restrictive laws regulating the administration of any therapeutic agent by physicians legally qualified to practice medicine.

Dr. Taylor also read the following endorsement of the Reference Committee on the Reports of Board of Trustees and Secretary, presented at the Washington session in 1927:

Your committee would therefore recommend that with the cooperation of the special committee headed by Dr. Mayer of Pennsylvania and the excellent executive of the Bureau of Legal Medicine and Legislation, Dr. Woodward, the Board of Trustees be directed to prepare a bill to be presented to Congress correcting the unfortunate provisions of the Volstead Act limiting the amount of alcohol used, and providing such regulations as will permit doctors to prescribe whatever amounts of alcoholic liquors may be needed for their respective patients, and subject to such reasonable restrictions as may be thought wise and best after a conference with the head of the prohibition department.

Dr. Taylor moved the adoption of the second section of the report, referring to the resolutions introduced by Dr. Roland Hammond, Rhode Island, and by the New York delegation. The motion was seconded by Dr. A. J. Bedell, New York, and carried.

The Executive Session adjourned at 2:45 p. m., and there being no unfinished business or new business, the House recessed at 2:50 p. m., to meet at 1 p. m., Thursday, June 11.

Fourth Meeting—Thursday Afternoon, June 11

The House of Delegates was called to order at 1 p. m. by the Speaker, Dr. F. C. Warnshuis.

Report of the Reference Committee on Credentials

Dr. J. D. Brook, Chairman, stated that Dr. J. Tate Mason, Section on Surgery, General and Abdominal, had lost his credentials but that he was on the Secretary's list and had been certified to by the secretary of the Section. Dr. Brook recommended that Dr. Mason be seated.

Dr. J. W. Burns, Texas, moved that Dr. Mason be seated. The motion was seconded by Dr. C. B. Wright, Minnesota, and carried.

Dr. Brook requested further time to report on the number of delegates that had filed proper credentials.

The Secretary called the roll and announced that more than a quorum were in attendance.

On motion of Dr. A. T. McCormack, Kentucky, seconded by Dr. A. J. Bedell, New York, and carried, the reading of the minutes was dispensed with.

Report of Reference Committee on Sections and Section Work

Dr. F. W. Cregor, Chairman, presented the following report:

Your Reference Committee on Sections and Section Work, to which was referred the resolution offered by Dr. M. E. Rehfuss, delegate for the Section on Gastro-Enterology and Proctology, has considered the same and begs leave to report it back to the House with the recommendation that it be referred to the Council on Scientific Assembly for such action as the Council may deem advisable.

Respectfully submitted.

F. W. CREGOR, Chairman.
A. J. BEDELL.
R. W. FOUTS.
J. F. HASSIG.
EDWARD D. LECOMPTE.

On motion of Dr. Cregor, seconded by Dr. A. J. Bedell, New York, and carried, the report was adopted.

Report of Reference Committee on Miscellaneous Business

Dr. J. N. Vander Veer, Chairman, presented the following report:

Your committee begs leave to report on the reference of the resolution introduced by the Michigan State Medical Society through its delegate, Dr. J. D. Brook, and appearing on page 28 in the handbook, which reads as follows:

WHEREAS, The Michigan State Medical Society, through its Committee on Civic and Industrial Relations, has made a comprehensive study of the question of filling out claim proofs of health and accident insurance companies; that this study has extended over a period of three years and has involved an extensive analysis of the subject, including a conference with representatives of several outstanding insurance companies; and that, as a result of such study and conference, the Michigan State Medical Society has adopted suitable resolutions providing for the charging of a fee to the insurance companies of not less than $2 for filling out each preliminary and final claim proof; and

WHEREAS, The Michigan State Medical Society, by its action in adopting such resolutions, has created the interest and favor of other state medical societies in the question, which equally affects every other state medical society; and that the Michigan State Medical Society has met with considerable opposition from the insurance companies, for the reason that they object strenuously to the plan and point out that Michigan represents only a small section of the nation and should not undertake a project affecting the policy of all the insurance companies of the United States; and

WHEREAS, The rights and privileges of the individual physicians of the entire United States are involved and are being encroached on by the health and accident insurance companies, which are continuing to insist that the services of the physician in filling out claim proofs are part of the physician's professional obligation to his patient; that the insurance companies are unwilling to concede that the information given to them is for their own statistical use in properly adjusting claims; and that they are unwilling to pay the physician his fee; therefore be it

Resolved, That the House of Delegates of the American Medical Association concur with and approve the action of the Michigan State Medical Society in adopting resolutions providing for the charging of a fee of not less than $2 for each preliminary and final claim proof; and that the House of Delegates of the American Medical Association authorize its Speaker to appoint a committee to whom this problem shall be referred; and be it further

Resolved, That this committee be instructed to study the facts and factors involved and to formulate a national policy that will result in remunerating physicians and surgeons for their service to insurance companies, when rendering these reports that contain expert opinions and professional advice; and be it further

Resolved, That the Committee of the Association shall make a full report and recommendation at the next annual meeting of the House of Delegates of the American Medical Association.

Your committee recommends that this resolution be referred to the newly created Bureau of Medical Economics for study and report at the next annual meeting of the House of Delegates of this Association, as each of the states has its own insurance laws; that each state medical society and the constituent county societies have their own economic bases under which they practice medicine, and that lastly a number of state medical societies are now in conference with the various insurance companies operating within their states.

Respectfully submitted.

J. N. VANDER VEER, Chairman.
G. HENRY MUNDT.
F. S. CROCKETT.
M. L. STEVENS.
ROLAND HAMMOND.

Dr. Vander Veer moved that the report be adopted. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and carried.

Report of Reference Committee on Credentials

Dr. J. D. Brook, Chairman, announced that 161 delegates had filed proper credentials.

Communication from President of the Woman's Auxiliary

The Secretary read the following communication from Mrs. J. Newton Hunsberger, president of the Woman's Auxiliary:

To the Members of the House of Delegates:

It has been my privilege for the past year to serve the Auxiliary to the American Medical Association as president. During that time we have endeavored to bring to a greater stage of perfection our organization rather than to enlarge our membership, which, however, has ably taken care of its own progress as we have now 13,000 paid members in thirty-seven states (organized).

We have installed a new system of recording our membership which will enable states as well as counties to keep a systematic and correct file.

A tabulation of the thirty-seven replies received to the thirty-seven questionnaires sent out show two thirds of the states have, now, advisory committees in their respective medical societies. Fourteen states have definite study outlines prepared for their use by the state medical society or their boards of public health. Most auxiliaries contribute to and read their state medical journals. All have participated in local, social programs and at state medical conventions, and so have increased sociability in the profession.

One new study has been prepared and distributed by the Program Committee and is being extensively used not only by our own members but also by the parent-teachers associations and the woman's clubs. The subject is "Communicable Disease Control" arranged in four parts: Introduction, Smallpox, Diphtheria, Typhoid Fever. To date 3,500 copies have been distributed.

Our Public Relations Committee has made contacts which enable us to work through.

The chairman on HYGEIA divided the states into five districts with a supervising chairman over each. Letters were mailed to all state presidents seeking their cooperation. Replies received from thirty-two states resulted in securing the names and addresses and terms of office of about 350 county presidents and HYGEIA chairmen. A survey of the reports shows that a majority of the auxiliaries are extolling the merits of HYGEIA for its educational value but it is very difficult to compete with other good magazines at the present price.

Our women take much interest in working for scholarship and medical benevolence funds. They rendered great assistance during the drought disaster, individually and through the Red Cross. They have participated in May Day Child Health programs, Christmas celebrations and summer outings for children in hospitals. They have housecleaned medical libraries to the satisfaction of critical doctors.

Some legislative work has been done in states but only under the direction of the advisory committees.

A large number of our auxiliaries take special delight in collecting historical material incident to medicine and the doctor of the past.

Turn about is fair play but we do greatly appreciate the courtesy of the American Medical Association through Dr. Olin West in printing the minutes and reports of our Detroit session and also for the use of two pages in the BULLETIN for the broadcasting of auxiliary news to our members, a much needed medium. The one regret is that all husbands are not Fellows, so frequently the BULLETIN does not find its way to our members. What is the solution of this problem?

We have visited twelve different states during the year and we feel the contact personally was not only enjoyable to us but beneficial to our members.

Two thousand pieces of mail have been sent from this office and many more by the chairmen of the committees.

We have put forth special energy through our able convention committee to make the Philadelphia meeting an outstanding success for all who attend.

If our efforts during the past year are acceptable to you we are well repaid.

Sincerely yours,

MRS. J. NEWTON HUNSBERGER, President.

Dr. A. T. McCormack, Kentucky, moved that the report of the Woman's Auxiliary be spread on the minutes and that the House of Delegates extend to the Auxiliary appreciation for its splendid service and confidence in its future course. The motion was seconded by Dr. H. B. Everett, Tennessee, and carried.

Invitation to Hold Eighty-Fourth Annual Session in Chicago in 1933

The Secretary read the following telegram, which was referred to the Board of Trustees:

Dr. William G. Morgan, President of American Medical Association, Officers and Delegates in convention assembled at Philadelphia: You are respectfully invited to give favorable consideration of giving Chicago the opportunity to be the host city for the eighty-fourth annual convention of the American Medical Association in 1933. Chicago is celebrating its centennial by way of Century of Progress Exposition in 1933. Hosts of physicians will want to visit the fair, which will assure one of the largest and best conventions ever held by the American Medical Association. Assuring you of our welcome to the American Medical Association officers, delegates and visitors in 1933, we are respectfully and fraternally,

CHICAGO MEDICAL SOCIETY,
JOHN R. HARGER, President-Elect.

Resolution from Section on Nervous and Mental Diseases Dealing with Standards for Neurologists and Psychiatrists

Dr. T. B. Throckmorton, Section on Nervous and Mental Diseases, presented the following resolution and moved its adoption:

WHEREAS, The National Board of Medical Examiners has indicated definite interest in establishing standards for the qualifications of neurologists and psychiatrists; and

WHEREAS, The National Board of Medical Examiners may arrange and conduct proper examinations of those who desire to practice neurology and psychiatry; and

WHEREAS, The National Board of Medical Examiners may confer certificates on those who meet the required standards; and

WHEREAS, There is need for such recognition by the group of men who are now completing fellowships in neurology and psychiatry; and

WHEREAS, Certificates by the National Board will receive both professional and lay recognition and aim to improve teaching in both the neurologic and the psychiatric fields: therefore be it

Resolved, That the Section on Nervous and Mental Diseases of the American Medical Association expresses its appreciation to the National Board of Medical Examiners and assures that Board of its active cooperation and willingness to participate in this educational movement.

The motion was seconded by Dr. J. W. Burns, Texas.

After discussion by Dr. F. C. Warnshuis, Speaker, Dr. Throckmorton withdrew his original motion and moved that the resolution passed by the Section on Nervous and Mental Diseases be referred to the Bureau of Medical Economics. The motion was seconded by Dr. C. B. Wright, Minnesota, and carried, after discussion by Dr. John Edward Lane, Connecticut.

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr. D. E. Sullivan, New Hampshire, moved that the majority and minority reports of the Committee on Amendments to the Constitution and By-Laws be taken from the table. The motion, seconded by Dr. William Kuykendall, Oregon, failed.

ELECTION OF OFFICERS

The Vice Speaker read the section of the By-Laws concerning the nomination and election of officers, and the Secretary read the standing rule forbidding the solicitation of votes.

Election of President-Elect

The Speaker called for nominations for the office of President-Elect of the American Medical Association.

Dr. Holman Taylor, Texas, nominated Dr. E. H. Cary, Dallas, Texas. The nomination was seconded by Dr. A. J. Crowell, North Carolina; Dr. J. W. Burns, Texas; Dr. William Kuykendall, Oregon; Dr. A. R. McComas, Missouri; Dr. R. W. Fouts, Nebraska; Dr. McLain Rogers, Oklahoma; Dr. W. H. Seemann, Louisiana; Dr. H. M. Johnson, Minnesota; Dr. Burt R. Shurly, Section on Laryngology, Otology and Rhinology; Dr. J. Q. Graves, Louisiana; Dr. Albert Soiland, California; Dr. T. B. Throckmorton, Section on Nervous and Mental Diseases; Dr. J. D. Brook, Michigan; the delegation from Illinois; the delegation from the state of Washington; Dr. Donald Macrae, Jr., Iowa; Dr. A. T. McCormack, Kentucky; Dr. H. B. Everett, Tennessee; Dr. Nathan B. Van Etten, New York; Dr. O. H. Weaver, Georgia, and Dr. E. C. S. Taliaferro, Virginia, who moved that the nominations be closed and the Secretary cast the ballot of the House for Dr. Cary. The motion was seconded by Dr. A. T. McCormack, Kentucky, and carried.

The Secretary cast the ballot of the House for Dr. E. H. Cary, Texas, and the Speaker declared Dr. E. H. Cary elected President-Elect of the American Medical Association by the unanimous vote of the House of Delegates.

Election of Vice President

Dr. William H. Mayer, Pennsylvania, nominated Dr. George C. Yeager, Philadelphia. The nomination was seconded by Drs. Arthur W. Booth, New York, and Mather Pfeiffenberger, Illinois.

Dr. Arthur J. Bedell, New York, moved that the nominations be closed and that the Secretary cast the ballot of the House for Dr. Yeager as Vice President. The motion was seconded by Dr. Kuykendall, Oregon, and carried.

The Secretary cast the ballot of the House for Dr. George C. Yeager, and the Speaker declared Dr. Yeager unanimously elected Vice President of the American Medical Association.

Election of Secretary

Dr. A. E. Bulson, Indiana, nominated Dr. Olin West, Chicago, Secretary.

Dr. C. B. Wright, Minnesota, moved that the nominations be closed and the Vice Speaker be instructed to cast the ballot of the House for Dr. West. The motion was seconded and carried.

The Vice Speaker cast the ballot of the House and the Speaker declared Dr. Olin West unanimously elected Secretary of the American Medical Association.

Dr. West addressed the House as follows:

I can only do as I have had the privilege of doing a number of times before and thank you most sincerely for this expression of your good will and confidence. I do want to depart from the procedure of the last few years, however, to say just one word about the services of those men who in my opinion make the American Medical Association the efficient organization that it is, so far as its efficiency goes. Those are the men who devote themselves to its service in the most unselfish and the most uncomplaining and the most efficient manner as members of its elected and appointed official bodies. These include the members of this House of Delegates, the officers and the members of every council and committee of the American Medical Association.

The American Medical Association never has been and never will be a one-man affair. Its strength has been created through the efforts, the labor, the devoted service of the men who serve on its official bodies. There seems to have gotten abroad the impression that there are only one or two men who do much work, but I want this House of Delegates to know and I would like the world to know that, so far as my knowledge goes, there is no official body of the American Medical Association that has ever failed in a call to service or that has ever neglected any duty that has been imposed on it. From this House of Delegates down to the smallest committee, the work of those who compose these bodies has been characterized by the most earnest effort and by the most unselfish devotion, and therein, my friends, lies the strength of the American Medical Association.

One other word I would like to say to you, that if you believe that only one or two persons connected with the Association work, we want you to come to its headquarters building at 535 North Dearborn Street, Chicago, and see 500 of the most industrious and earnestly interested employees to be found anywhere. I want to emphasize that invitation. We would like for all of you and for any Fellow or member of this Association to come here and get thoroughly familiar with the character and the scope of the work that is done in that building. We would like for you to see that of the entire 500, from the printer's devil to the top, everybody works, with a single purpose, to promote the art and the science of medicine, the interests of its practitioners, and the interests of the public whom we serve.

I am more grateful than I could ever say for your expression of confidence, and can only do as I have done for several years, assure you that I desire no greater privilege than an opportunity to do what I can to serve you and to serve the cause of medicine in the United States.

Election of Treasurer

Dr. Edward B. Heckel, Chairman, Board of Trustees, nominated Dr. Austin A. Hayden, Chicago, to succeed himself as Treasurer.

Dr. Arthur J. Bedell, New York, moved that the nominations be closed and the Secretary be instructed to cast the ballot of the House for Dr. Austin A. Hayden, Chicago, as Treasurer of the Association for the ensuing year. The motion was seconded and carried.

The Secretary cast the ballot of the House and the Speaker declared Dr. Austin A. Hayden unanimously elected Treasurer of the American Medical Association.

Election of Speaker of the House of Delegates

The Vice Speaker, Dr. Albert E. Bulson, took the chair and announced that nominations were in order for Speaker of the House of Delegates.

Dr. H. A. Luce, Michigan, nominated Dr. Fred C. Warnshuis, Grand Rapids, Mich., as Speaker of the House of Delegates.

Dr. E. C. Thrash, Georgia, seconded the nomination and moved that the nominations be closed and that the Secretary cast the ballot of the House for Dr. Warnshuis as Speaker. The motion was seconded and carried.

The Secretary cast the ballot of the House and the Vice Speaker declared Dr. F. C. Warnshuis elected Speaker of the House of Delegates for the ensuing year.

Election of Vice Speaker

The Speaker resumed the chair and declared the next order of business to be the election of a Vice Speaker.

Dr. Daniel S. Dougherty, on behalf of the New York delegation, nominated Dr. John A. Card, New York, as Vice Speaker.

The nomination was seconded by Dr. E. R. Mulford, New Jersey.

Dr. F. S. Crockett, Indiana, nominated Dr. A. E. Bulson, Indiana. The nomination was seconded by Dr. Frank W. Cregor, Section on Dermatology and Syphilology.

On motion of Dr. C. B. Wright, Minnesota, regularly seconded and carried, the nominations were closed.

The Speaker appointed as tellers Drs. Daniel S. Dougherty, New York; F. W. Cregor, Section on Dermatology and Syphilology; Mather Pfeiffenberger, Illinois, and John H. O'Shea, Washington.

Address of Dr. Hubert Work

The Speaker introduced Dr. Hubert Work, who addressed the House as follows:

Mr. Speaker, I thank you for the opportunity to look the House of Delegates in the face again, an experience I enjoyed for a number of years and with very great pleasure. I assure you that I have had no experience before or since, either in public or in private life, that I have enjoyed more or that required a keener, more active and alert mind, than presiding over this House of Delegates.

I appreciate, Mr. Speaker, that it is customary before a prize fight to put on a preliminary bout, and I assume that this is the reason I was called. I congratulate you, sir, on your election, and I congratulate this House of Delegates on being itself. It is a very distinguished body of acutely minded men.

Again thanking you for the privilege of speaking to these men for a moment, I retire.

Address of President-Elect E. H. Cary

The Speaker introduced President-Elect E. H. Cary, who spoke as follows:

Mr. Speaker, Mr. President, Members of the Board of Trustees, Gentlemen of the House of Delegates:

This is a happy circumstance which brings me before you. I deeply appreciate it. For you it is largely an impersonal affair. For one who is honored or is marked by your favor it is an event of profound importance. I am not unmindful of the fact that this honor carries with it many demands as well as opportunities. Indeed, I approach it with a quality of humility, tempered as the result of years of service as a member of the Board of Trustees.

I am an organization man. I believe in the principles which underlie this structure as it is already built. I would not suggest to you gentlemen a change in its form or in its procedure.

The desire on my part and on any one's part who may be honored by you is to give you sound thinking and courageous leadership, and as I sit on the sidelines for the next year, upholding and watching the great President you have, it will be my pleasure to cooperate and utilize whatever power and strength I may possess to uphold his hands.

The solution of our problems, if we have any problems, and I take it that we have many, will come with the proper use of that wisdom which we have within our profession, lay opinion notwithstanding.

We recognize that we have made progress in many places. Research has brought a new conception to old ideas. We require a certain amount of time to give proper consideration to the new theories and to accustom ourselves to proved facts, but, gentlemen, there never was a time in our history when there were so many men so well able to assimilate and put into practice proved facts.

While a member of your Board of Trustees I caught a glimpse of what seemed to me to be a need for a new home for this great organization and its many established activities. While it is something to publish the greatest medical journal on earth, a real accomplishment, no one doubts the fact that this organization as it is set up can expand in many ways.

There should not be developed anywhere a greater library, certainly one that would be able to serve those gentlemen who are not in centers and one that would be able to serve the men who live in remote places. There is a wonderful opportunity to accumulate a vast and wonderful museum. On display there should be a scientific exhibit constantly expanding. Medical economics and medical art should be available to this profession, and all those extramural activities which are not taught in our medical schools should find a place in some great home where the needs of the medical profession are brought about and cared for.

I think that all of these things can be economically and profitably devised. So let's build a home, some day, as strong as the strength of scientific truth, as lofty as the highest ideals of our art, as broad as the need of man, as beautiful as the hope of service, a tower to inspire all of us to constant and consistent work for the glory of achievement and the lessening of humanity's load of ignorance, pain and disease; an expression of the unified thought of this, our profession, in this our country, in this our century, to stand for us for the ages to come, and in this spirit, gentlemen, I come to you. You can command me.

Election of Vice Speaker (Continued)

The Secretary announced that 152 members of the House of Delegates had recorded themselves as present.

The Secretary further announced that of 146 ballots cast, 83 were for Dr. A. E. Bulson, Indiana, and 63 for Dr. John A. Card, New York.

The Speaker declared Dr. A. E. Bulson, Indiana, elected Vice Speaker of the House of Delegates.

On motion of Dr. John A. Card, New York, seconded by Dr. A. W. Booth, New York, and carried, the election of Dr. Bulson was made unanimous.

Report of Board of Trustees

DR. E. B. HECKEL, Chairman, Board of Trustees, announced that the Board has granted a leave of absence to the editor of THE JOURNAL for a period of six weeks, adding that Dr. Fishbein's general health had not been as good as it should be, and the Board felt that he was entitled to this vacation as he had never had one before.

Address of Dr. Morris Fishbein

The Speaker called on Dr. Fishbein, who addressed the House as follows:

Members of the House of Delegates:

Unaccustomed as I am to public speaking (laughter), I will endeavor on this occasion to express to the Board of Trustees and to the members of the House of Delegates my sincere appreciation of this leave of absence. It represents the first vacation of more than six days that I have taken in eighteen years. I have been told by members of the Board of Trustees and particularly by Dr. Olin West, whom I consider the best friend that I ever had, that it will probably be good for me to have this little rest.

I am reminded largely of a colored boy who was being taken by the draft officers down to the draft headquarters, and another colored boy saw him going down and he said to him, "Boy, where you goin'?"

He said, "I ain't goin', they're takin' me."

I want to assure you that my interest in THE JOURNAL and in the work of the Association and in the progress of everything that we are trying to do means so much to me that only this sort of thing would probably have caused me to go. I feel that we have created in THE JOURNAL and in HYGEIA two of the greatest publications in the world. I want to see, perhaps, what is being done in other places of the world in order that if possible we may improve these things even more. You know Dr. Wendell Phillips' old story of the rooster that came into the hen coop pushing a goose egg in front of him and saying "I am not condemning and I am not insinuating; I am merely showing you what others are doing."

That is largely the reason behind this vacation, and with that idea in mind I want to thank you again.

Election of Trustee

The Speaker announced that the next order of business was the election of a Trustee to serve for a period of five years to succeed Dr. Cullen of Maryland.

Dr. Randolph Winslow, Maryland, nominated Dr. Thomas S. Cullen to succeed himself. The nomination was seconded by Dr. E. J. Goodwin, Missouri, and by Dr. C. B. Wright, Minnesota, who moved that the nominations be closed and the Secretary instructed to cast the ballot for Dr. Cullen. The motion was seconded and carried.

The Secretary cast the ballot of the House for Dr. Thomas S. Cullen to serve as a member of the Board of Trustees until 1936, and the Speaker declared Dr. Cullen unanimously elected to succeed himself.

Message from Dr. William W. Keen

Dr. P. W. Tomlinson, Delaware, presented the following message from Dr. William W. Keen:

Mr. Speaker and Gentlemen of the House of Delegates:

It was my pleasure this morning to call to see Dr. Keen. I was agreeably surprised to find him as jovial as he is. He complained that he was unable to write any more since he had a stroke of the right side a few months back. I told him I thought he had written enough anyway, to stop.

The message is that he wished me to convey to the House of Delegates his heartiest wishes for a continuation of the splendid work which they have been doing and a hope that they will continue to do it. I want to add, too, for Dr. Keen that I am sure he is proud of the accomplishments of the American Medical Association, and it is his hope and the wish of his heart that the American Medical Association shall continue to grow and to grow, shining brighter and brighter, and like an unfixed star rising higher and higher, until she shall have reached the zenith of her glory and radiate her greatness to the remotest corners of the earth.

Message to Dr. John B. Deaver

Dr. Donald Macrae, Jr., Iowa, moved that the Secretary be instructed to send a suitable message to Dr. John B. Deaver, who was very ill.

The motion was seconded and carried, and the Speaker so instructed the Secretary.

Nominations for Standing Committees

Dr. E. Starr Judd, President, presented the following nominations for standing committees:

Dr. Walter F. Donaldson, Pittsburgh, to succeed Dr. J. N. Hall, Denver, on the Judicial Council, for a term of five years.

Dr. Dean Lewis, Baltimore, to succeed Dr. Walter F. Donaldson, Pittsburgh, as a member of the Council on Medical Education and Hospitals for a term of seven years.

Dr. John E. Lane, New Haven, Conn., to succeed himself as a member of the Council on Scientific Assembly for a term of five years.

Dr. A. T. McCormack, Kentucky, moved that these nominations be confirmed. The motion was seconded by Dr. Mather Pfeiffenberger, Illinois, and Dr. Orrin S. Wightman, New York, and carried.

Election of Affiliate Fellows

The Secretary read the list of names proposed for Affiliate Fellows and approved by the Council on Scientific Assembly:

Dickinson, G. E., Upper Fairmount, Md.
Hall, S. S., Minneapolis.
Lape, Rushmore, Fair Haven, Vt.
Onsgard, L. K., Houston, Minn.
Strout, E. S., Minneapolis.
Van Slyke, Charles A., St. Paul.
Whitcomb, Edward H., St. Paul.
White, Joseph A., Richmond, Va.
Wilson, Warren, Northfield, Minn.
Wilson, William F., Lake City, Minn.
Webster, H. R., Texarkana, Ark.-Texas.

On motion of Dr. O. S. Wightman, New York, seconded by Dr. Arthur J. Bedell, New York, and carried, the physicians listed were elected to Affiliate Fellowship in the American Medical Association.

Election of Associate Fellows

The Secretary read the names proposed for Associate Fellowship and approved by the Judicial Council:

APPLICANT FROM ADJACENT COUNTRY

Wilkins, W. A., Montreal, Canada.

AMERICAN MEDICAL MISSIONARIES

Albertson, Miriam A., Barcilly, India.
Brown, Velva V., Swatow, China.
Bohnsack, Eleanor, Ambur, India.
Evans, Eugene H., East Cleveland, Ohio.
Hoffman, Rolla E., Meshed, Persia.
Calvert, Read Nathaniel, Shanghai, China.

On motion of Dr. Orrin S. Wightman, New York, seconded and carried, the nominees listed were elected to Associate Fellowship.

The Secretary read the names proposed for Associate Fellowship and approved by the sections named:

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Armbrecht, Edward C., Wheeling, W. Va.
Weinstein, Herman, New York.

SECTION ON PEDIATRICS

Gittings, John C., Harwood, Md.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Leake, C. D., San Francisco.

SECTION ON PATHOLOGY AND PHYSIOLOGY

Beard, Howard H., Cleveland.
Carmichael, Emmett B., University, Ala.

SECTION ON NERVOUS AND MENTAL DISEASES

Weil, Arthur, Chicago.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

Cox, John W., Alexandria, Va.
Chen, Thomas T., Baltimore.
Gardner, Leroy U., Saranac Lake, N. Y.
Osborne, F. J., East Orange, N. J.
Richardson, Anna M., Northampton, Mass.

On motion of Dr. J. W. Burns, Texas, seconded by Dr. Burt R. Shurly, Michigan, and carried, the nominees listed were elected to Associate Fellowship.

Nomination of Honorary Fellow

The Secretary announced that the Section on Ophthalmology nominated Dr. A. A. Magitot of Paris for Honorary Fellow of the Association, and stated that the By-Laws require that the nomination be referred without debate to the Council on Scientific Assembly.

Place of Annual Session

The Speaker announced that the next order of business was the selection of the place of the 1932 annual session and requested that the Board of Trustees make nominations.

The reader read the following report from the Board of Trustees:

Invitations for the 1932 session of the Association have been received from Memphis, New Orleans and San Francisco.

The Board of Trustees has investigated the facilities of these cities and has to report that those of San Francisco are adequate, and that in its opinion the facilities of New Orleans are more adequate than those of Memphis.

Dr. H. B. Everett, Tennessee, extended an invitation from Memphis; Dr. Irving S. Ingber, California, an invitation from San Francisco, and Dr. W. H. Seemann, Louisiana, an invitation from New Orleans.

The Secretary announced that of 148 ballots cast, New Orleans received 99, Memphis 31, and San Francisco 18.

The Speaker declared New Orleans the place for the next annual session of the American Medical Association as it had received a majority of the votes cast.

Election of Honorary Fellow

The Council on Scientific Assembly endorsed the nomination of Dr. A. A. Magitot, Paris, France, for Honorary Fellowship in the American Medical Association. On motion of Dr. J. W. Burns, Texas, seconded by Dr. O. S. Wightman, New York, and carried, Dr. Magitot was elected an Honorary Fellow.

Invitation for Annual Session in 1933

Dr. Charles W. Stone, Ohio, presented an invitation for the American Medical Association to meet in Cleveland in 1933, stating that the invitation was extended by the Academy of Medicine of Cleveland and approved by the Ohio State Medical Association and by municipal, civic and educational authorities, groups and institutions of the city. This invitation was referred to the Board of Trustees.

Proposed Amendments to the Constitution and By-Laws

Dr. J. Gurney Taylor, Wisconsin, served notice of an amendment to section 1, chapter IV, of the By-Laws, for action at

the next annual session, to change the method or manner of making nominations for the office of President-Elect of the Association.

Dr. D. E. Sullivan, New Hampshire, gave notice of a proposed amendment to the Constitution providing a change in section 2, article V, for the medical director of the Veterans' Bureau to be a delegate. The Speaker announced that this notice and proposed amendment to the Constitution would lie over until the next annual session.

Unfinished Business

Dr. A. T. McCormack, Kentucky, in a motion addressed to the Vice Speaker, extended to the Speaker the appreciation of the House of Delegates for his unfailing loyalty to duty and the splendid manner in which he had conducted the proceedings of the House. The motion was seconded by Dr. A. A. Ross, Texas, and several other members, put to a vote by the Vice Speaker, and carried unanimously.

Dr. A. T. McCormack, Kentucky, moved that an expression of the gratitude of the House of Delegates be extended to the Philadelphia County Medical Society, to the Medical Society of the State of Pennsylvania, to the citizens of Philadelphia and particularly and especially to the mayor and to the press, as well as to the Woman's Auxiliary of Philadelphia and Pennsylvania for all the things that had made this meeting stand out as one of the most delightful in the Association's history. The motion was seconded by Dr. J. W. Burns, Texas, and carried.

The Secretary read the following letter addressed to Dr. William Gerry Morgan by Thomas S. Gates, president of the University of Pennsylvania:

The University of Pennsylvania cordially invites you and your associates in the American Medical Association to attend the baseball game between Pennsylvania and Dartmouth on next Saturday.

The delegates to the meeting will be admitted on their badges to the North Stand of Franklin Field, where seats will be reserved. The parade and alumni day exercises begin at 1:30 p. m.

The House of Delegates adjourned sine die at 3:10 p. m.

REGISTRATION AT PHILADELPHIA

The total registration at the Philadelphia session was 7,006. Below are given two summaries—one by sections and one by states:

REGISTRATION BY SECTIONS

Practice of Medicine	2,057
Surgery, General and Abdominal	931
Obstetrics, Gynecology and Abdominal Surgery	487
Ophthalmology	462
Laryngology, Otology and Rhinology	457
Pediatrics	479
Pharmacology and Therapeutics	46
Pathology and Physiology	197
Nervous and Mental Diseases	276
Dermatology and Syphilology	234
Preventive and Industrial Medicine and Public Health	203
Urology	231
Orthopedic Surgery	172
Gastro-Enterology and Proctology	218
Radiology	285
Miscellaneous (two or more sections or no section marked)	271
Total	7,006

REGISTRATION BY STATES

Alabama	15	New Hampshire	10
Arizona	3	New Jersey	565
Arkansas	13	New Mexico	2
California	78	New York	936
Colorado	32	North Carolina	102
Connecticut	100	North Dakota	4
Delaware	67	Ohio	290
District of Columbia	176	Oklahoma	33
Florida	40	Oregon	8
Georgia	44	Pennsylvania	1,347
Illinois	223	Philadelphia	1,459
Indiana	77	Rhode Island	16
Iowa	44	South Carolina	33
Kansas	22	South Dakota	2
Kentucky	28	Tennessee	54
Louisiana	35	Texas	103
Maine	14	Utah	7
Maryland	177	Vermont	10
Massachusetts	157	Virginia	159
Michigan	129	Washington	14
Minnesota	77	West Virginia	61
Mississippi	6	Wisconsin	51
Missouri	90	Wyoming	4
Montana	3	Miscellaneous	58
Nebraska	28	Totals	7,006

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Society News.—The Lawrence County Medical Society was addressed, recently, by Drs. William M. Majors, Paragould, on "The Acute Surgical Abdomen" and Francis Walter Carruthers, Little Rock, on "The Diagnosis and Treatment of Fractures," illustrated.——Dr. Hoyt R. Allen, Little Rock, among others, spoke on "Common Diseases of the Rectum" and Dr. George V. Lewis, "Chronic Appendicitis" before the Independence County Medical Society, recently, in Batesville.——Speakers before the Mississippi County Medical Society, May 12, in Wilson were Drs. William W. Walker on "Prenatal Care" and Roswell E. Flack, Memphis, Tenn., "Early Symptoms of Tuberculosis."

CALIFORNIA

Ginger Paralysis Epidemic in Southern California.—*Public Health Reports* recently published the results of a survey of the epidemic of ginger paralysis that occurred in southern California. The investigation, conducted by Dr. Maurice I. Smith and Elias Elvove, Ph.D., of the U. S. Public Health Service, showed that in the latter part of December, 1930, or early in January, 1931, adulterated fluidextract of ginger containing tricresyl phosphate was shipped from New York to Los Angeles, from where it was distributed through the retail drug trade in Los Angeles, San Pedro, Whittier, Sawtelle and possibly other nearby sections. The consumption of this beverage resulted in an epidemic of "ginger paralysis," comprising about 125 cases, occurring in the last two weeks of January and the first two weeks of February. The epidemic was quickly brought under control, however, because of the early recognition of the condition and the effective measures taken by the local city and county health departments.

DISTRICT OF COLUMBIA

Organize Child Guidance Clinic.—Dr. Paul J. Ewerhardt, director, has recently completed the organization of the Washington Child Guidance Clinic. The clinic is a project of the Washington Institute of Mental Hygiene, of which Dr. William A. White is president. It is located in one of the public schools, and deals with children in cooperation with the schools, the social agencies and the parents.

IOWA

Society News.—Dr. Floyd W. Rice, Des Moines, addressed the Calhoun County Medical Society, April 16, on "Lessons Learned from One Hundred Consecutive Confinements," and Dr. Everett D. Plass, Iowa City, "Birth Control."——The Cerro Gordo County Medical Society held a heart clinic, April 12; the speakers were Drs. Fred M. Smith and Clarence W. Baldridge, Iowa City, and Daniel J. Glomset, Des Moines.——Drs. Edward T. Edgerly and Harold A. Spilman, Ottumwa, among others, addressed a joint meeting of the Clarke, Decatur and Warren counties medical societies, April 23, on "Pneumothorax, a Clinical and Roentgenologic Study."——Drs. Francis E. Senear and James G. Carr, Chicago, addressed the Clinton County Medical Society, April 23, on "Skin Diseases of Interest to the General Practitioner" and "Biliary Tract Diseases," respectively.

KENTUCKY

Personal.—Dr. Jefferson L. Atkinson, Campbellsville, recently retired from practice after forty-four years of medical work, forty-one of which were spent in Campbellsville. Dr. Atkinson has been associated with his son, Dr. William B. Atkinson, and with Dr. Edwin L. Gowdy, who will continue to practice together.——Dr. Miriam R. Marting, Indianapolis, has been named director of the full time health unit to be established in Greenup County.

Health Officers Appointed.—The following appointments as county health officers have recently been announced: Dr. Lewis C. Coleman, Salyersville, to Madison County, succeeding Dr. Harold W. Sterling, who has accepted a position in the U. S. Public Health Service; Dr. Robert J. Gillespie, Long Beach, Miss., to Magoffin County, succeeding Dr. Lewis

C. Coleman; Dr. Allen F. Murphy, Beckley, W. Va., to Lee County; Dr. Squire R. Boggess, Lawrenceburg, to Anderson County.

Health Units Planned.—Several counties have taken steps to establish full-time health units under the plan whereby the federal and state governments assume a portion of the expense incurred. Dr. Francis W. Forge of the state department of health is in Cynthiana, Harrison County, organizing the health unit, which will be ready to function July 1. The board of education of Somerset, May 11, appropriated $500 toward the unit which will be established in Pulaski County. The Nicholas County fiscal court appropriated $500, May 11, toward the unit which will be established, July 1, at an annual cost of $7,000. Warren County will have a unit costing $12,500, of which local governing bodies will appropriate $5,000 and the state and federal governments the remainder. Each unit will employ a physician, inspector and two nurses.

LOUISIANA

Society News.—The Orleans Parish Medical Society was addressed, June 8, by Drs. Edward L. King and John A. Lanford on "The Rabbit Ovulation Test in the Diagnosis of Pregnancy"; Emile A. Bertucci, "The Predisposing Cause of Pulmonary Tuberculosis from the Standpoint of Endocrinology," and John B. Gooch, "Etiology and Prognosis of Sinusitis."——The Fifth District Medical Society of Louisiana and the Issaquena-Sharkey-Warren Counties Medical Society of Mississippi had a joint meeting, June 16, in Monroe. Among the speakers were Drs. Emmett Lee Irwin, New Orleans, on "Early Diagnosis of Some Acute Abdominal Conditions"; Joseph Edgar Stewart, St. Louis, "Fractures of the Upper End of the Femur," and Hiram W. Kostmayer, New Orleans, "Office Treatment of Gynecological Cases."——The Eighth District Medical Society was reorganized, June 1, in Alexandria, when Dr. William G.. Allen, Converse, was elected president and Dr. Jacob H. Landrum, Alexandria, secretary-treasurer. Following this meeting, the Rapides Parish Medical Society was addressed by Dr. Paul King Rand on "Errors in Calcium Metabolism" and Dr. Blanchard H. Texada on "Syphilis of the Lungs" with report of a case. A motion picture on "Rehabilitation After Fractures" was shown.

MICHIGAN

In Memory of Dr. Eve.—Governor Brucker unveiled a tablet at Hamtramck High School, May 3, commemorating the services of Dr. Paul Fitzsimmons Eve to Poland. Thirty-two Polish organizations were represented. Dr. Eve, who was born in Augusta, Ga., took part in the Polish insurrection against Russia in 1830. He was President of the American Medical Association in 1857.

Free Cancer Clinic.—A free cancer clinic was held by physicians of Port Huron, June 1, in Port Huron Hospital. Five physicians and surgeons diagnosed the patients, and free treatment was offered for those unable to pay. The purpose of the clinic was to make an intensive drive against cancer, to educate the public in its symptoms and peculiarities and to discover it in its early stages.

Grants by Children's Fund of Michigan.—The second annual report of the Children's Fund of Michigan notes the following grants made in the interest of health and recreation: $2,500 to a camp for crippled children maintained by the League for Crippled Children; $400 to the University of Michigan Fresh Air Camp; $2,500 to the Detroit Section of the National Council of Jewish Women for a summer play school; $2,500 to a committee of school and welfare officials in Royal Oak Township for a summer recreation program in that area, and $1,500 to employees of the special education department of the Detroit school system toward a camping project for subnormal boys. A camp will be opened this summer for indigent Negro children, under the direction of the Detroit Urban League for Negroes, on fifty-five acres bordering on Lake Pleasant purchased by the fund and on which it is erecting buildings; $1,500 for an intensive program in childhood tuberculosis in the area of Calumet. A former grant of $1,500 to the Michigan State Medical Society for graduate clinics in pediatrics was renewed, and a similar amount was given the Joint Committee on Health Education. The Otter Lake Billet of the American Legion received $1,200 for a solarium, and a recreational and health program. The Visiting Nurse Association of Detroit received $2,200 toward a special cooperative undertaking with the district dental society. A grant of $1,500 was contributed toward the budget of the Starr Commonwealth for Boys at Albion, and an appropriation of $7,500 made to enable Judge Ruth Thompson of the Muskegon County Juvenile Court to experiment with the boarding home method of caring for delinquent children. A grant of $2,500 was made to the Friend of the Court of Oakland County to assist that officer in better supervision of children of broken homes. A grant of $50,000 was made to the Porto Rico Committee of the American Child Health Association for an undertaking similar to the consolidated county health units in Michigan. Renewed grants included $22,000 to the inquiry being carried on by Russell W. Bunting, D.D.Sc., at the University of Michigan Dental School into the causes of the decay of children's teeth, and $20,000 to the inquiry into causative factors leading to juvenile delinquency carried on by the Yale Institute of Human Relations in Detroit. A sum of $15,300 was given to a study being carried on by Samuel J. Lewis, D.D.S., into orthodontic problems, particularly dental growth and the growth of bones, and $12,000 was given to the St. Vincent de Paul Society of Detroit for an inquiry into problems relating to childhood tuberculosis which the society is carrying on in cooperation with Henry Ford Hospital under the direction of Dr. Joseph A. Johnston. Pursuing a general policy of working through existing agencies wherever possible, a grant of $19,312 made the first year to the Michigan Children's Aid Society for service to dependent children was renewed, and an additional amount of $9,750 was given to the society because the economic conditions threw an added load of upstate children on it while revenues from the same sections fell off. A sum of $50,500 was set aside for distribution, through the Detroit Teachers Association, the Wayne County commissioner of schools, various suburban branches of the Community Union and an occasional less formal committee, to children whose families were in economic distress this year.

MISSOURI

Society News.—Dr. Charles J. Eldridge, Kansas City, addressed the Jasper County Medical Society on "Intussusception in Children," April 12, in Joplin; Dr. Paul A. Gempel, Kansas City, spoke, April 21, on the cause and treatment of sterility.——Drs. Charles C. Dennie and Frank J. Hall, Kansas City, addressed the Bates and Vernon-Cedar County Medical Society, April 16, in Butler, on "Treatment of All Forms of Syphilis by Malarial Inoculation" and "Infections of the Mouth and Throat," respectively.——Drs. Otto H. Schwarz and Harold A. Bulger, St. Louis, were speakers before the Cape Girardeau County Medical Society, April 13, on "Eclampsia: Its Etiology and Treatment" and "Relation of Parathyroid Glands to Certain Types of Bone Diseases," respectively.——Dr. Quitman U. Newell, St. Louis, read a paper on "Diagnosis and Treatment of Gonorrhea in the Female," April 15, before the Five-County Medical Society in New Madrid, and Dr. Robert J. Crossen, St. Louis, on "Modern Medical Management of Gynecological Cases."——The Livingston County Medical Society was addressed, April 21, in Chillicothe, by Drs. Rexford L. Diveley, Kansas City, on "Diagnosis and Treatment of Fractures of the Upper Extremities," and Charles C. Conover, Kansas City, "Diagnosis and Treatment of Acute Rheumatic Fever."——Dr. Frank R. Finnigan, St. Louis, spoke on constipation before the St. Francois-Iron-Madison County Medical Society, April 21, in Bonne Terre.——Dr. August A. Werner, St. Louis, read a paper on "Endocrine Conditions" before the Lawrence-Stone County Medical Society, May 5, in Aurora.——The Nodaway County Medical Society was addressed by Dr. Joseph E. Welker, Kansas City, on "Diagnosis and Treatment of Cardiac Edema," May 8, in Maryville.——Dr. Bertrand Y. Glassberg, St. Louis, among others, spoke before the Marion County Medical Society, on "True Diabetes and Pseudodiabetes," May 1, in Hannibal.

MONTANA

Pioneer Physician Honored.—Dr. Hugh J. McDonald, pioneer resident and physician of Butte, was honored at a banquet recently for his forty-one years of service in the community. Dr. Wyman W. Andrus, Miles City, past president of the Medical Association of Montana, was among the 250 medical and business men attending. Dr. McDonald was given a leather traveling bag.

NEW HAMPSHIRE

State Medical Election.—Dr. George C. Wilkins, Manchester, was elected president of the New Hampshire Medical Society, May 20, at its annual meeting at Manchester; Dr. Dennis E. Sullivan, Concord, was reelected secretary. The next annual meeting will be held in Manchester.

Society News.—Dr. William Wayne Babcock, Philadelphia, was guest speaker recently at the thirty-third semiannual meeting of the New Hampshire Surgical Club in Manchester.

NEW YORK

State Medical Election.—Dr. William D. Johnson, Batavia, was installed as president of the Medical Society of the State of New York at its annual meeting, June 2; Dr. Charles G. Heyd, New York, was made president-elect, and Dr. Daniel S. Dougherty, New York, was reelected secretary. The next annual session will be held in Buffalo.

Health at Albany.—Telegraphic reports to the U. S. Department of Commerce from eighty-one cities with a total population of 36 million, for the week ended June 6, indicate that the highest mortality rate (18.2) appears for Albany, and the rate for the group of cities as a whole, 11.5. The mortality rate for Albany for the corresponding period last year was 15.2, and for the group of cities, 12.6. The annual rate for eighty-one cities for the twenty-three weeks of 1931 was 13.2, as against a rate of 13 for the corresponding weeks of 1930. Caution should be used in the interpretation of weekly figures, as they fluctuate widely. The fact that some cities are hospital centers for large areas outside the city limits, or that they have a large Negro population may tend to increase the death rate.

New York City

Leprosy Eradication Fund Completed.—The Leonard Wood Memorial Committee announced, May 30, it is reported, that it had completed its goal of a $2,000,000 endowment for the eradication of leprosy. The campaign was started in 1927 on the appeal of the late General Wood, then Governor-General of the Philippines, and was carried on after his death as a memorial to him. The actual amount received was $2,031,000, contributions being received from 50,000 persons. The active chairman of the committee was Gen. James G. Harbord, and the honorary chairman, Secretary of State Henry L. Stimson.

Research in Plant Pathology at Rockefeller Institute.—A new division of plant pathology is to be established by the Rockefeller Institute for Medical Research in connection with its department of animal pathology at Plainsboro, N. J. This is said to be the first time that human pathology, the pathology of plants and that of the lower animals have been brought together in a single investigative unit. Since an increasing number of diseases of man and lower animals are being discovered to be induced by filter-passing viruses, the pathology of animal and the pathology of plant diseases have been brought into intimate association, the institute's announcement points out. Louis O. Kunkel, pathologist at the Boyce Thompson Institute for Plant Research, Yonkers, N. Y., will have charge of the new division.

Hospitals for Specialties.—A new twelve story building will be erected at the Medical Center which will provide facilities not only for the treatment and hospital care of all classes of eye patients, but also for the teaching of medical students and the training of nurses in this field, and for routine study and advanced research in all matters relating to this branch of medicine at Columbia University. The structure is the gift of Edward S. Harkness, who will provide for its equipment and maintenance. It will be the first unit in the group of projected specialty hospitals which are to surround the great central garden court lying to the south of the main buildings of the Medical Center. Administrative offices, examination and emergency treatment rooms and private practice offices will be located on the first floor. The second floor contains residential quarters for the staffs and the private offices of the director of the institute. Above this are the ward floors and the floors devoted to semiprivate and private patients' rooms. Provision has been made for beds at all rates, from free ward beds to the most costly private suites. The bed capacity will be 114. The institute will be under the direction of Dr. John M. Wheeler, professor of ophthalmology at Columbia University College of Physicians and Surgeons, and head of the ophthalmologic service at the Presbyterian Hospital.

Society News.—"Has the Family Doctor Outlived His Usefulness?" was the subject of an address by Dr. Wingate M. Johnson, Winston-Salem, N. C., before the Medical Society of the County of New York, May 25.——Prof. Rudolph Krauss, director of sanitation, Chile, South America, lectured in Blumenthal Auditorium, Mount Sinai Hospital, May 22, on "Brill's Disease and the Weil-Felix Reaction."——Dr. Frank L. Meleney addressed the New York Surgical Society, May 13, on "Bacterial Synergism in Disease Processes."——A mental hygiene institute under the auspices of the National Committee for Mental Hygiene and the American Association of Mental Hygiene Executives was held, May 14-15. Among the speakers were Drs. Clarence M. Hincks, Toronto, who discussed mental hygiene from a national point of view, and Milton C. Winternitz, New Haven, Conn., who discussed the place of medicine in mental hygiene programs.——Arthur Mutscheller, Ph.D., and Harvey C. Rentschler, Ph.D., addressed the Medical Association of the Greater City of New York, May 18, on "Biological Reaction of Cells to X-Ray" and "Application of Ultraviolet Rays for Medical and Nonmedical Purposes," respectively.——A symposium on hygiene featured the third anniversary celebration of the organization of the International Spanish Speaking Association of Physicians, Dentists and Pharmacists, May 22. Among the speakers were Prof. F. Schneersohn of Berlin and Dr. M. Secondari of Rome.

OHIO

Physicians Provide Medical Unit.—Physicians of Summit, Portage and parts of Medina and Wayne counties have pledged $4,000 to construct and equip the proposed medical unit at Camp Manatoc. A memorial is also planned to the late H. Karl Butler who donated the camp site and made the improvement of the camp a part of his will. The medical unit will be in the center of the camp and will consist of two rooms for examination of boys who enter the camp, first aid and emergency treatment; two rooms for the medical personnel, and a four bed dormitory. Dr. Charles C. Pinkerton, Akron, president of the Summit County Medical Society, is chairman of the committee of physicians raising the money to meet the $4,000 pledge.

The First Rachford Lecture.—A portrait of the late Dr. Benjamin K. Rachford, former head of the department of pediatrics, University of Cincinnati College of Medicine, was unveiled, May 21. Many friends and subscribers to the endowment fund for the Benjamin Knox Rachford Memorial Lectures were in attendance. Dr. Leonard G. Parsons, Birmingham, England, delivering the first of these lectures, presented an outline of Dr. Rachford's career and discussed his writings. He was introduced by Dr. Albert Graeme Mitchell. Herman Schneider, Sc.D., president of the university, presided, and Frederick C. Hicks, Ph.D., research professor of economics, made the presentation to Dr. Arthur C. Bachmeyer, dean of the medical school, who accepted on behalf of the college. The portrait is the work of John Weiss.

OKLAHOMA

Personal.—Dr. Calhoun Doler, Elk City, has been appointed superintendent of the Western Oklahoma Tuberculosis Sanatorium, Clinton, to succeed Dr. Elmer E. Darnell, resigned.

State Medical Meeting and Election.—The thirty-ninth annual session of the Oklahoma State Medical Association was held, May 11-13, at Oklahoma City, under the presidency of Dr. Edmund S. Ferguson, Oklahoma City. The guest speakers included Drs. John H. Musser, New Orleans, whose subject was "Normal and Diseased Heart"; Dean Lewis, Baltimore, "Malignant Growths of the Gastro-Intestinal Tract"; Vilray P. Blair, St. Louis, "Facial Abnormalities Fancied and Real; the Reaction of the Patient; Their Attempted Correction"; Clinton K. Smith, Kansas City, Mo., "Traumatic Rupture of the Kidney," and Bransford Lewis, St. Louis, "Decline and Revival of Movable Kidney Surgery." Dr. Henry C. Weber, Bartlesville, was installed as president of the society at this meeting, and Dr. Robert M. Anderson, Shawnee, was selected as president elect. Dr. Claude A. Thompson, Muskogee, was reelected secretary. The next annual meeting will be held at Tulsa. At the recent meeting, the council moved to appropriate further funds for the purpose of educational moving picture films and to appropriate one half of the necessary funds to hold one day clinics in eight centers in the state during the next year.

PENNSYLVANIA

Society News.—Dr. Verne A. Dodd and Dr. Philip J. Reel, Columbus, Ohio, spoke on "Intestinal Obstruction and Ileus" and "Vaginal Discharges," respectively, before the Fayette County Medical Society, May 7, in Uniontown.——Dr. Alan G. Brown, Toronto, among others, spoke on "Irradiation of Foodstuffs and Their Relation to the Health of the Child" before the Erie County Medical Society, April 7.——Dr. William Cullen Bryant, Pittsburgh, spoke on "Spinal and Caudal Anesthesia, Its Applications, Indications and Contra-Indications" before the Jefferson County Medical Society, April 9. The talk was illustrated with four reels of motion pictures on spinal anesthesia.——A paper on "A New Treatment for the Umbilical Cord" was read by Dr. Benjamin B. Wechsler at the scientific meeting of the Allegheny County Medical Society, May 19, in Pittsburgh.——Drs. Temple S. Fay and Nathaniel W. Winkelman, Philadelphia, presented a symposium on brain tumors before the Lackawanna County Medical Society in

Scranton, June 2.——Dr. Walter Estell Lee, Philadelphia, addressed the Lehigh County Medical Society, May 12, on "Hospital Problems."

Philadelphia

Dr. Fisher Honored.—A portrait of Dr. John M. Fisher, associate professor of gynecology at Jefferson Medical College and oldest ex-intern of Jefferson Hospital, was presented to the college, June 3; it was the gift of the alumni of the college. Dr. Frank C. Hammond made the presentation, and Dr. Ross V. Patterson, dean of the college, accepted it.

Personal.—Dr. Irving S. Cutter, dean, Northwestern University Medical School, Chicago, received the honorary degree of doctor of laws at the commencement of Jefferson Medical College. Dr. Cutter also delivered the address.——Dr. William L. Clark was given a dinner by the American Physical Therapy Association, June 9, in recognition of his development of electrosurgical methods.

Dr. Nye to Direct Curtis Clinic.—Dr. Robert B. Nye, chief resident physician at Jefferson Hospital for the last two years, has been appointed director of the Curtis Clinic at Jefferson Medical College Hospital. The Curtis Clinic is a $1,500,000 twelve story structure designed to group the various medical, surgical and specialty divisions. The new building, which is expected to be ready for occupancy early in the fall, was named in honor of Cyrus H. K. Curtis.

Laboratories Dedicated.—The Edward W. Bok Roentgen Therapy Department and the Brady Memorial Department of Roentgenology, comprising twenty-six laboratories, clinic and research rooms in Temple University Hospital and School of Medicine, were dedicated, June 10 (THE JOURNAL, April 25, p. 1417). Addresses were made by Charles E. Beury, LL.D., president of Temple University, and by Dr. William Edward Chamberlain who will direct the department.

Course in Psychiatry at Conference of Clergy.—At the second session of the Clergy Summer Conference conducted at the Philadelphia Divinity School, June 8-11, the relation of the vast new knowledge of psychiatry to that of religion was one of the principal courses of study. Dr. Earl D. Bond, professor of psychiatry, University of Pennsylvania School of Medicine, spoke on psychiatry. He was assisted by Dr. Kenneth E. Appel, assistant professor of psychiatry of the University of Pennsylvania Medical School. The conference was open to clergy of all denominations.

Hospital News.—The Northwestern General Hospital began a drive, April 20, to enroll 10,000 persons in the Dollar Club, in order to raise $10,000 for hospital work. Contributors will receive membership cards entitling them to special rates for medical attention.——A receiver was appointed for the West Philadelphia General Homeopathic Hospital and Dispensary, April 22, by Judge O. B. Dickinson of the Federal Court, the first action of the kind ever taken against a hospital by the United States District Court. Lack of funds has hampered the hospital, it is reported. The assets are said to be valued at $160,000, or twice the amount of its liabilities. W. J. Fater was named receiver.

RHODE ISLAND

Society News.—Speakers before the Providence Medical Association, June 1, were Drs. Harry C. Messinger and Adolph W. Eckstein on "Retinal Hemorrhage after Blood Transfusion," and James P. O'Hare, Boston, on "The Practical Value of Blood Chemistry with Especial Reference to Nephritis."

TEXAS

Free Health Forums.—Baptist Hospital, Houston, is sponsoring a series of Free Health Forums, the programs for which are furnished by staff members. There are no charges for admission. The hospital bears the expense. The program for the first forum, May 1, was given by Drs. Alvis E. Greer, who spoke on "Diabetes"; Herman W. Johnson, "Prenatal Care," and Malcolm T. MacEachern, Chicago, "Houston Hospitals"; a movie film was shown on "Appendicitis." The second program, May 11, was furnished by Drs. Paul V. Ledbetter, whose subject was "Heart Diseases"; Robert A. Johnston, "Cesarean Sections," and Samuel Gibbs Milliken, "Cancer." "Feeding the Fires of the Body" was the title of the movie presented at this meeting. More than 2,000 people were present at each of these forums, which were held in the First Methodist Church.

Society News.—Dr. Samuel G. Gant, New York, addressed the Harris County Medical Society, Houston, February 4, on proctology.——Dr. Lassiter T. Tinkle, Lufkin, addressed the Angelina County Medical Society, February 9, on treatment of chronic arthritis.——Dr. W. P. Gardner, Texarkana, addressed a joint meeting of the Bowie County Medical Society and the Miller County Medical Society of Arkansas, January 16, on diseases of pregnancy.——Dr. John B. Deaver, Philadelphia, spoke on "Operative and Nonoperative Treatment of Surgical Diseases, Especially of the Upper Abdomen," before the Dallas County Medical Society, Dallas, January 8.——Drs. Arthur W. White and Horace Reed, Oklahoma City, addressed the Potter County Medical Society, Amarillo, February 9, on peptic ulcer from the standpoint of the internist and surgeon, respectively.——Drs. Henry T. Safford, Kevin D. Lynch and Felix P. Miller recently presented a symposium on anesthesia before the El Paso County Medical Society.——Dr. Olin F. Gober, Temple, addressed the Williamson County Medical Society, Taylor, February 10, on pyelitis of pregnancy.——Three Fort Worth physicians presented the following program before the Medical Society of Childress, Collingsworth, Hall, Donley and Wheeler Counties, Childress, April 10: Drs. Ernest H. Bursey, "Primary Purpura Hemorrhagica"; Thomas L. Goodman, "Obscure Maxillary Sinus Infection," and George R. Enloe, "Intestinal Obstruction."——The Tarrant County Medical Society was addressed, April 21, among others, by Drs. Roy L. Grogan, Fort Worth, on "Prophylactic Forceps in Delivery" and Ximie R. Hyde, "Injudicious Use of X-Radiation."

WISCONSIN

Short Course on the Nose and Throat.—Dr. Franz Haslinger, Hajek Clinic, Vienna, will conduct a course on the nose and throat, with particular emphasis on the larynx, June 22-26, at the Wisconsin General Hospital, Madison. This graduate course is being given under the auspices of the Wisconsin State Medical Society, the University of Wisconsin Medical School and the University Extension Division.

Medical Business Bureau.—The Medical Society of Milwaukee County recently started the operation for its members of a bureau of credits and collections to be known as the Medical Business Bureau. Mr. Gregory Gramling, who is specializing in medical law, it is said, and who has recently served the society as attorney, has been chosen manager of the bureau. The Medical Business Bureau proposes to afford an effective and dignified attempt to aid the debtor to pay for his medical care, together with a prompt straightforward procedure for those who refuse payment. It is also planned to keep available for the use of members a record of credit information.

Course in Obstetrics and Gynecology for Practicing Physicians.—A course of lectures and clinics for the furtherance of better obstetrical practice is being given for practicing physicians of the state under the auspices of the Wisconsin State Medical Society, the University of Wisconsin Medical School and the University of Wisconsin Extension Division. The meetings will be held once each week (two hours) for twelve weeks in Appleton, Green Bay, Manitowoc, Marinette, Oshkosh and Sheboygan. The specific dates, hours and places of meeting will be determined with reference to the desires of the greatest number of physicians registering. The course, which began June 15, is being conducted by Dr. Everett D. Plass, professor of obstetrics and gynecology, State University of Iowa College of Medicine, Iowa City, and Dr. Otto H. Schwarz, professor of obstetrics, Washington University School of Medicine, St. Louis. The fee for the entire course is $30. Application should be made to Mr. Nelson D. Conners, field representative, University Extension Division, 314 University Extension Building, Madison.

WYOMING

Personal.—Dr. William O. McDermott, Casper, was recently appointed health officer of Natrona County, succeeding Dr. Homer R. Lathrop.——Dr. Frances M. Lane, Cody, was recently named health officer of Park County, replacing Dr. Frank A. Mills, Powell.

GENERAL

Data on Syphilis Insontium.—According to a recent communication, an attempt is being made to collect data on syphilis insontium in the dentist contracted while performing his professional duties, the purpose being to help reduce the number of these cases and to publish definite information on the subject. The cooperation of physicians who have treated such cases or of dentists who have become victims of this disorder is desired. The information submitted will be confidential, and should include the initials of the dentist to avoid duplication; date of first visit; clinical age of lesion on first visit; size of primary lesion, locating definitely; how contracted, whether

puncture, burr, break skin or bite; basis of diagnosis, Kahn, Wassermann, dark-field, of clinical termination; and whether cured, improved or treatment incomplete. All communications should be sent to Joseph L. T. Appleton, Jr., D.D.S., Thomas W. Evans Museum and Dental Institute School of Dentistry, University of Pennsylvania, Philadelphia.

Society News.—Dr. Bernard Sachs, New York, was elected president of the American Neurological Association at its recent annual meeting, and Dr. Henry Alsop Riley, New York, reelected secretary.——Dr. William P. Graves, Boston, was installed as president of the American Gynecological Society at its recent annual meeting; Dr. George Gellhorn, St. Louis, was made president elect, and Dr. Otto H. Schwarz, St. Louis, elected secretary.——Dr. Louis Hamman, Baltimore, was elected president of the American Climatological and Clinical Association at its annual session, May 8, and Dr. Arthur K. Stone, Framingham Center, Mass., was reelected secretary.——At the annual session of the American Urological Association, May 20, Dr. Alexander Randall, Philadelphia, was installed as president; Dr. George R. Livermore, Memphis, Tenn., was made president elect, and Dr. Gilbert J. Thomas, Minneapolis, reelected secretary.——Dr. Richard A. Kern, Philadelphia, was installed as president of the Association for the Study of Allergy at its recent meeting in Philadelphia; Dr. Albert H. W. Caulfeild, Toronto, was made president-elect; Dr. Francis M. Rackemann, Boston, vice president, and Dr. Warren T. Vaughan, Richmond, secretary-treasurer.——Dr. Louis H. Clerf, Philadelphia, was elected president of the American Bronchoscopic Society at its annual session, June 6, in Philadelphia. Dr. Richmond McKinney, Memphis, Tenn., was elected secretary.——Dr. Harvey G. Beck, Baltimore, was elected president of the American Therapeutic Society, June 6, at its annual session, and Dr. Grafton Tyler Brown, Washington, D. C., reelected secretary.

Bequests and Donations.—The following bequests and donations have recently been announced:

Episcopal Hospital, Philadelphia, $10,000, and St. Christopher's Hospital for Children, $1,000, by the will of the late Samuel L. Haines.

Presbyterian Hospital, Philadelphia, $10,000 to endow a room in honor of the decedent's mother, and $5,000 for the building fund or the permanent endowment fund, by the will of Miss Anna V. Glading.

Methodist Episcopal Hospital, Philadelphia, $3,000 to endow a bed in perpetuity, by the will of Miss Caroline Dingee. This hospital also received a bequest of $25,000 by the will of T. Comly Hunter, the income from which is to be used for repairs to the Mary T. Hunter Home for Nurses; $10,000 as an endowment for the nurses' home, and a fund of $25,000, the income from which is to be used for maintenance of the home. The Hunter will further provided for the erection of an additional building to be called the Josephine T. Hunter Home, the cost not to exceed $250,000.

Memorial Hospital, Pawtucket, R. I., $5,000, by the will of Howard H. Payne.

Lebanon Hospital, New York, and Rockefeller Institute, each $25,000 by the will of the late Mr. Joseph Leblang.

Hospital for Ruptured and Crippled, New York, $7,000 by the will of the late Sarah N. Peck, and $2,500 by the will of Howard W. Charles.

Methodist Episcopal Hospital, Philadelphia, her residence valued at $55,000, and $20,000 to endow two memorial beds by the will of the late Mrs. Margaret J. Freeman.

Youngstown Hospital, Youngstown, Ohio, and Garfield Memorial Hospital, Washington, D. C., each $25,000 by the will of James Parmelee.

Brightlook Hospital, St. Johnsbury, Vt., $10,000 by the will of Elmer Darling.

Jefferson Medical College, Philadelphia, the bulk of his estate valued at more than $1,000,000 by the will of Samuel P. Scott.

Staten Island Hospital, Tompkinsville, Staten Island, N. Y., $25,000 by the will of the late Mrs. Julie Kahle.

Wyckoff Heights Hospital, Brooklyn, $25,000, and Lutheran Hospital, Brooklyn, $10,000 by the will of the late John Welz. A residuary bequest of $25,000 will ultimately go to the former institution.

Midtown Hospital, New York, $100,000 by the will of George A. Helme.

Presbyterian Hospital at Columbia University Medical Center, New York, $229,576; Roosevelt Hospital, $153,056, and Cornell University, $25,000, by the will of the late Otto M. Eidlitz.

Salem City Hospital, Salem, Ohio, $10,000 by the will of Mrs. Sarah A. Metzger.

Orleans County Memorial Hospital Association, Inc., Newport, Vt., property valued at $15,000 by the will of Mrs. Flora A. Guild of Orleans.

Rosenwald Fund Experiment in Hospital Care Discontinued.—The Julius Rosenwald Fund recently published a report on the year's experiment in supplying hospital and medical care to patients of moderate means at reduced rates, payable in instalments. The experiment was conducted in two hospitals in Keokuk, Iowa, which has a population of 15,000 and which was chosen as "an average American city," during the year beginning February, 1930. The plan was discontinued by the action of the hospitals' medical staff, despite the fact, it is reported, that the administration officials of the hospitals and the Rosenwald Fund favored its continuance. Under this plan, patients not in the charity class, yet unable to meet the regular costs of medical and hospital rates, were enabled to procure treatment and care for about half of the customary expense and were permitted to pay these reduced costs on the instalment plan, if they were unable to settle in full at the time of their discharge from the hospital. An admitting officer, whose salary was paid by the fund, investigated all applications for such care which was known as the "middle rate" plan. If it was found that the applicant could not pay the ordinary rates, but was not in the charity class, the patient was admitted to the hospital, placed in a two bed room, given the customary nursing, food, laboratory tests, dressings, drugs, physician's care and other needs just as if he were paying the full rates. On discharge the hospital would present a bill to the patient to cover entire cost, out of which the hospital would pay the attending physician his fee, reduced to meet the middle rate charges. Under this schedule, for example, an obstetric case with ten days' hospitalization cost only $43, of which the attending physician received $20. It was reported that the two staffs, in objecting to the continuance of the plan, protested, among other things, that it was "state medicine" which interfered with the physician's professional independence. In sponsoring the plan, it was said that the fund agreed to meet two-thirds of the loss, if any, incurred by the two hospitals through lack of occupancy of the beds set aside for the middle rate patients, and also to pay one third of any loss incurred by the hospital and physician if patients accepted under the plan failed to pay their bills.

HAWAII

Hawaii Territorial Medical Association.—Dr. Joseph E. Strode, Honolulu, was elected president of the Hawaii Territorial Medical Association at its annual meeting, May 9, and Dr. Lyle G. Phillips, Honolulu, was elected secretary. The next annual session will be held at Honolulu in April, 1932.

Government Services

U. S. Public Health Service

A. A. Surg. Carl C. Cooley, relieved at Norfolk, Va., and assigned to duty at Ellis Island, N. Y.; Asst. Surg. Paul A. Neal, Jr., relieved at Warsaw, Poland, and assigned to duty at Copenhagen, Denmark; Medical Director John S. Boggess, relieved at Copenhagen, Denmark, and assigned to duty at Ellis Island, N. Y.; A. A. Surg. Joseph S. Murrow, designated as quarantine officer for Port St. Joe, Fla.; Sr. Surg. George Parcher, relieved at Oslo, Norway, and assigned to duty at Warsaw, Poland; P. A. Surg. Joseph F. Van Ackeran, relieved at Bergen, Norway, and assigned to duty at Oslo, Norway; Sr. Surg. Hugh De Valin, relieved at Dublin, Irish Free State, and assigned to duty at Antwerp, Belgium; A. A. Surg. Barton Brown, relieved at Fortress Monroe, Va., and assigned to duty at Gloucester, N. J.; Sr. Surg. Emil Krulish, relieved at Prague, Czechoslovakia, July 6, and at expiration of leave assigned to duty at Copenhagen, Denmark; Asst. Surg. Paul A. Neal, Jr., relieved at Copenhagen, August 9, and assigned at Liverpool, England; P. A. Surg. Ralph B. Snavely, relieved at Liverpool, England, August 10, and assigned at Prague, Czechoslovakia; Victor H. Vogel, called to active duty and commissioned as assistant surgeon in regular corps of the public health service, effective June 15, and assigned to duty at the marine hospital, San Francisco.

Change of Station in the Navy

Comdr. John C. Parham, from Garde d'Haiti, Port au Prince, Haiti, to the naval hospital, Great Lakes, Ill.; Capt. Frederick E. Porter, from the naval station, Guam, to naval hospital, Puget Sound, Wash.; Rear Admiral Ammen Farenholt, from the bureau of medicine and surgery to duty as inspector of medical department activities, eleventh naval district; Lieut. Comdr. Alanson L. Bryan, from U. S. S. *Medusa* to navy yard, Mare Island, Calif.; Lieut. Norris M. Hardisty, from navy yard, Portsmouth, N. H., to the naval station, Guantanamo Bay, Cuba; Comdr. Ernest W. Brown, detached about June 1 from marine barracks, Quantico, Va., to naval medical school, Washington, D. C.

Army Personals

Capt. Herbert E. Tomlinson, relieved at Fitzsimons General Hospital, Denver, and will sail for the Hawaiian Department from San Francisco about August 8; Major Howard T. Wickert, following leave of absence granted on completion of course of instruction at Fort Leavenworth, will sail about August 19, for the Philippine Department.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 23, 1931.

A Memorial to Hughlings Jackson: The Philosopher of Neurology

A fund is being raised to establish a memorial to Hughlings Jackson, who played a great part in the foundation of modern neurology. When he died in 1911 it was written: "He united the generalizations of philosophy to carefully collected clinical observations in a manner that still remains unique." Now, twenty years later, these words remain true. His great contemporary and lifelong friend Sir Jonathan Hutchinson described Jackson as "my greatest discovery," for he persuaded the neurologist not to abandon medicine for literature, as he intended. "For years," wrote Hutchinson, "I plumed myself upon this as the most successful achievement in my long life. Of late, however, I have had misgivings and have doubted whether—great as has been the gain to medicine—it might not have been a yet greater gain to the world at large if Hughlings Jackson had been left to devote his mind to philosophy." As early as 1866 he arrived by clinical deduction at the doctrine of cerebral localization, regarding convulsions as "an experiment on the brain by disease." Thus he anticipated by several years the experimental work of Hitzig and Ferrier. He showed that in the cerebral centers not muscles but movements were represented and grasped the fact that the centers were sensorimotor, so that voluntary movement is "a glorified reflex." His recognition of the storage of word memories formed the basis of the theory of sensory aphasia. But the climax of his work was the application of the doctrine of evolution, as expounded by Herbert Spencer, to neurology. He regarded the nervous system as composed of three evolutionary levels. The "lowest and most automatic" was the spinal cord and basal ganglions; the intermediate was the motor cortex; and "the highest and most voluntary" was the frontal cortex. Then he showed that in disease "dissolution" (using the word in the Spencerian sense to signify the reverse of evolution) took place. The highest levels suffered first and the patient passed from "a more voluntary to a more automatic state." It is curious that, while his philosophical conceptions have been universally accepted as throwing a flood of light on neurology, no work has been done on these lines either by his contemporaries or successors. Though rare, philosophic minds can always be found in the profession. They love to adorn their addresses, and sometimes their teaching, with philosophic speculation. Moreover, the doctrine of evolution has profoundly affected the medical as it has all spheres of human thought. But it has been left for Hughlings Jackson alone to take the generalizations of evolution, as formulated by Spencer, as the warp and clinical observations as the woof and weave from them a beautiful fabric, which endures for the admiration and instruction of all. But it can still be said that his philosophical generalizations are in advance of the neurology of the age.

An appeal for subscriptions has been made by the leaders of medicine and neurology, in which the desire is expressed that "the inspiration that he gave to many in his lifetime should be kept fresh and still serve as stimulus to a younger generation who knew him not." It is hoped to raise an amount sufficient to provide a permanent endowment for the Hughlings Jackson Lecture, given every third year before the section of neurology of the Royal Society of Medicine. Dr. Wilfred Harris, 56 Wimpole Street, London, W. 1, is treasurer of the fund and subscriptions should be sent to him marked "Hughlings Jackson Memorial Fund."

Financing Hospitals by Sweepstakes

The Irish have discovered a new method of financing their hospitals. An organization in Dublin, legalized by the Government, "the Irish Hospital Sweepstake," operates in connection with English horse racing with great success, drawing most of the money from England, where sweepstakes of this kind are not legal. For the next sweepstake on the Derby (the famous English horse race) nearly $8,000,000 has already been received and another $500,000 is expected. The prizes are such as excite the envy of the ordinary man—from $150,000 downward. About two thirds of the money goes in prizes and expenses. The hospitals receive a fifth, in this instance about $1,700,000. The result of the last sweepstake was that the hospitals received $2,200,000. The success of the scheme has been so great that a bill has been introduced into the Dail extending the benefit to county hospitals. Mr. Cosgrave (the Prime Minister) said that what made these sweepstakes so attractive was that they were run on a sound business basis. In no other sweepstakes in the world was such a large proportion of the money collected distributed in prizes. In England persons have been prosecuted for selling the sweepstake tickets and the postoffice has held up subscriptions. But this does not seem to interfere at all with the project. People make use of friends visiting Dublin to obtain tickets for them and even couriers are dispatched. Naturally the scheme has aroused much discussion among hospital managers in England and the question is asked, why should all this money go to Ireland (about two thirds comes back in prizes)? Why not hold sweepstakes here? But after discussion hospital managers have by a majority decided against the proposal. One reason is the puritan feeling in England—by no means universal but strong in a section of the population—against gambling. Another reason is that if the method were adopted there might be a falling off of hospital subscriptions, which is stated to have already occurred in Ireland.

A Post-Epidemic Encephalitis Unit

That new and mysterious disease, epidemic encephalitis, was first observed in Roumania in 1915. It spread rapidly through Europe and was carried to America in 1919 and soon became worldwide. The occurrence of a considerable number of cases in London led the Metropolitan Asylums Board to set apart, in 1925, a special hospital for the observation and treatment of the after-effects. A report has been made by Dr. G. A. Borthwick, the medical superintendent, and Dr. F. L. Golla, director of the Central Pathological Department of the Mental Hospitals Department of the London County Council. It is a valuable contribution to our knowledge of the etiology, diagnosis and prognosis of a disease which presents a serious problem by reason of its grave sequelae. The incidence has shown a marked decline throughout the world during the last two years. The peak year was 1924 in England and 1926 in the United States. In England and Wales the number of cases rose from 541 in 1919 to 5,039 in 1924 and then declined to 1,036 in 1929. In London the numbers increased from 85 in 1919 to 600 in 1924 and then dropped to 92 in 1929. The mortality of notified cases in this country has been 53 per cent, but this figure is probably too high, as many cases are so slight as not to be notified in the acute stage and the disease has been diagnosed only on the development of sequelae. Probably about one third of the cases are fatal and from a half to two thirds of the survivors have chronic manifestations. A deterioration of character and morals, especially in children, is a well known result. The experience of the London unit is that the milder cases of behavioristic disorders have done well under the routine of the hospital school. Some patients have been discharged much improved and their behavior has continued good, but others have relapsed and had to be readmitted. In the more severe cases, showing restlessness, pugnacity, thieving and sexual misconduct, the patients have benefited to a certain degree by the environmental treatment of

the unit. When the acute attack begins in adult life behavioristic changes usually do not occur. But those who have developed behavioristic changes in childhood or adolescence continue to show them in adult life and are very difficult to manage. The underlying cause being probably organic, only palliative treatment is possible. As to the pathologic changes, the conclusion drawn is that the sequelae are due to neuronal irritation and destruction by some unknown virus, probably a variant of some preexisting one which achieved increased virulence during the unhygienic conditions in the battle area of the great war, and now having caused epidemic waves all over the world has again become attenuated and lost its attacking power. There has been a steady diminution in the number of cases throughout the world during the past five or six years, and it is hoped that the disease is dying out. But those who have been attacked and present sequelae will require treatment for many years to come, and the hospital unit, such as this, is best for them.

PARIS

(From Our Regular Correspondent)

May 6, 1931.

Gallium in Treatment of Trypanosomiasis

Messieurs Levaditi, J. Bardet, A. Tchakirian and A. Vaisman, during experimental studies on the therapeutic properties of certain rare earths, undertaken under the direction of Mr. Urbain, professor of chemistry at the Faculté des sciences, discovered that gallium possesses remarkable trypanocidal and spirillicidal properties. Utilized in the form of a tartrate or benzoate, it exerts a potent preventive and curative action toward experimental syphilis and trypanosomiasis. In the rabbit inoculated experimentally with syphilis, the spirochetes disappear in three to four hours. Mice inoculated with trypanosomiasis and doomed to die, in the ordinary course of events, in from twenty-four to forty-eight hours, recovered and the trypanosomes disappeared from the circulation in from twenty-four to thirty hours. Equally effective results were secured in monkeys inoculated with syphilis. In a communication presented to the Academy of Sciences, Mr. Levaditi spoke of the expectations that have been awakened by these researches.

Society for Promotion of Blood Transfusion

A society has been founded in Paris, under the patronage of women of the élite class, to aid in the promotion of blood transfusion in urgent cases by collecting funds that make it possible to have available at all times donors who are suitable to furnish such blood as is needed. Although transfusion is employed today by many surgeons and obstetricians, there is only a small number of selected donors available. The management of the Assistance publique has in Paris twelve organized centers; but there are no such centers for the numerous clinics frequented by the well-to-do class. Only recently, an American woman who was a patient in the American Hospital at Neuilly, had to undergo a cesarean operation as the culmination of an eighth pregnancy. An hour after the operation, which appeared to have been successful, the patient was seized with syncope as the result of internal hemorrhage. Transfusion was ordered, but a suitable donor could not be procured under four hours. The transfusion was given too late, and the patient succumbed. The husband took the case into court and demanded 1,250,000 francs ($50,000) damages from the hospital obstetrician Dr. Bouffe de St. Blaise, and from Dr. Tzanck, hospital physician, both eminent specialists, and from the administration of the American Hospital, on the ground that a professional tort had been committed in not providing the necessary aid in the event of such an accident. The court refused the demand and declared that it was not proved that an earlier transfusion would certainly have saved the patient, and that, furthermore, the physicians had done their duty in ordering blood transfusion and that its prompt realization did not depend on them. The American Hospital was not compelled, in view of present conditions, to have a supply of blood donors constantly available. The application of this kind of serum was still too recent for one to count on its generalization in all the clinics of France. Nevertheless, the incident caused a great stir in high Paris society. In order to procure the necessary funds, a committee was appointed, with the princess of Faucigny-Lucinge serving as chairman, to make an appeal to the population of Paris. A soirée will be given, with high prices for tickets, under the chairmanship of the minister of public health. A new film will be projected and Prof. Léon Bernard will deliver an address on the benefits of blood transfusion.

Increase in Soldiers' Pensions

A nation-wide movement has been launched against the abuse of soldiers' pensions. The total amount of allotted pensions is constantly increasing in spite of the natural deductions due to death. All the wounded or disabled men receive a just pension, which has been constantly readjusted to correspond to the deflation of the franc and the increased cost of living. But there have been created throughout the country many veterans' associations, which are becoming constantly larger and more influential. Their leaders bring pressure to bear on the members of parliament and play an important rôle at the time of general elections. During the war there were four million men mobilized, which constitutes today 20 per cent of the voters. The leaders of the veterans' associations, in order to maintain their popularity, harass parliament constantly with new demands, which results in a veritable pillaging of the national treasury. The outcome has been that not only those actually wounded or suffering disablement are pensioned, more or less liberally, but any person who was mobilized, including those who served in a military bureau far from the battle line, and who today, thirteen years after the war, is affected with bronchitis or rheumatism, may declare himself to be a victim of the war and may demand a pension. Even those who are in good health demand, by reason of having been mobilized, a pension as a veteran as soon as they reach age 50. The government, yielding to the pressure brought to bear by the loud-voiced veterans' associations, has been so weak as to grant such pensions. The pensions will amount this year to 800,000,000 francs ($32,000,000) and in two years to the enormous sum of 3,000,000,000 francs, or $120,000,000. Ex-service men who were dismissed from the army, at the beginning of the war, because suspected of being tuberculous—at a time when the examinations were hastily performed and the decisions necessarily of doubtful accuracy, all receive a large pension, in spite of the fact that they are today in good health, either because they have recovered or because the diagnosis was wrong. Professor Sergent, addressing the Academy of Medicine, suggested that these pseudotuberculous pensioners, who cost the government a billion francs a year, be reexamined, whereupon he was immediately subjected to the most violent attacks. For a month, the police had to guard his home, where certain members of the veterans' associations had the habit of collecting and of throwing stones at the windows. The law declares, it is true, that all indemnities accorded for wounds or diseases contracted during the war are definitive and not subject to revision. At the present time, France, as all other countries, is passing through a grave economic crisis. The people are carrying a heavy load of taxes. The government is finally becoming alarmed over the state of affairs. A minister, Mr. Piétri, and the president of the council, Mr. Pierre Laval, recently delivered here two significant addresses in which they declared that this mendicity must be put a stop to, as it is ruining the financial situation of France. They have declared that no new pensions will be granted; otherwise, before long, half of France will have to work to pay the pensions of the other half; especially since all the victims of the war have had long enough.

time (five years) to file their claims. It will be recognized that these men had the courage of their convictions; for they run the risk, at the coming elections, of having the associations of veterans leagued against them.

Dr. Flexner Elected Corresponding Member of Academy of Sciences

Dr. Simon Flexner, director of the research laboratory of the Rockefeller Institute, has been unanimously elected corresponding member of the Institut de France (Académie des sciences) by reason of his excellent scientific career and his important publications. This is an honor that is accorded to only a small number of foreign scientists. Dr. Flexner received, some time ago, the title of doctor honoris causa from the Faculté de médecine of the University of Strasbourg, and in 1923 was made commander of the Legion of Honor of France.

BUENOS AIRES

(From Our Regular Correspondent)

April 16, 1931.

Municipal Hospital of Radiology and Physical Therapy

The Instituto Municipal de Radiologia y Fisioterapia, a radiology and physical therapy hospital, one of the largest in the world, has been inaugurated at the federal capital of Argentina. Dr. H. Carelli is the director. The six story building covers a surface of 10,000 square meters at Parque Centenario and cost 1,050,000 pesos ($1,018,500). The departments of phototherapy are a replica of those of the Instituto Finsen at Copenhagen. The radium department has 2 Gm. of radium. Patients of any of the municipal hospitals of the federal capital who need physical therapy should be treated at this new hospital, since the only radiologic services given by the other municipal hospitals will be those related to roentgen diagnosis. The personnel comprises 170 persons. Patients will pay in accordance with their economic condition. Only indigent persons or fathers of many children will receive free treatment. The fields covered by the new hospital will include roentgenography, radioscopy, radiotherapy, radium therapy, electrotherapy, electrodiagnosis, electrocardiography, artificial and natural phototherapy, kinesitherapy and hydrotherapy. Each department has enough subdepartments to cover the entire number of physical therapeutic methods hitherto known. The new hospital has excellent installations and it is well equipped. There are also special technical laboratories as well as laboratories of chemistry and bacteriology.

Revision of the "Codex Medicamentarius"

The national government of Argentina appointed an honorary committee to study and revise the Argentine pharmacopeia. The members of the committee will act as counselors in the affairs related to the pharmacopeia. Drs. I. Ymaz, B. A. Houssay, M. R. Castex, M. Soto, R. Alsina, J. J. Spangenberg, P. Corti, J. A. Sánchez, T. J. Rumi, L. Rossi, A. Sordelli, J. Magnin, E. Ymaz and A. Bandoni comprise the committee which, as a whole, is ruled by the national department of hygiene of Argentina.

University News

Dr. B. Nazar Anchorena is the official delegate appointed by the national government of Argentina to straighten out the difficulties arising from the recent law by which students lose the privileges which they used to have of intervening in the appointment of deans of the several university faculties. Dr. Nazar Anchorena in turn has appointed Dr. J. C. Navarro to take charge of the faculty of medicine of Buenos Aires, whose dean and faculty resigned to facilitate the necessary changes. Drs. A. de la Vega and J. Spangenberg were appointed for the Universidad del Litoral and Dr. Spangenberg's school of medicine, respectively. The new delegate ordered that Drs. R. Coulin, J. B. Abalos, M. Vignoli, M. Vega, P. Rueda and P. Omnés, who had been suspended, should continue on duty and begin with the work of the present year. After learning that the annulment of the appointments of Drs. J. T. Lewis and E. Hug had been made by the council on a misunderstanding, he revoked the annulment.

Personals

Drs. M. L. Perez, R. Finochietto, Rodriguez Villegas and R. Buzzi have been appointed heads of the maternity department of the Hospital Rawson and of the departments of surgery of the Alvear and H. Piñero hospitals, respectively.

Dr. G. Arazo Alfaro, president of the national department of hygiene of Buenos Aires, has been appointed representative of the national health department of Argentina to attend the Pan-American Conference of directors of public health, which will be held in the United States in the near future. He left Argentina for the United States, April 27. During his absence, Dr. T. Padilla will take charge of his duties.

ITALY

(From Our Regular Correspondent)

April 30, 1931.

Congress of Urology

The ninth Congress of Urology, organized by the Società italiana di urologia, was held at Rome. Professor Lasio mentioned, in his presidential address, that, during the previous year, two further chapters of the urologic society had been founded: that of Leghorn, under the directorship of Professor Lilla, and that of Palermo, under Professor Pavone. Although the congress was of only national scope, it was attended by a number of foreign scientists. The main topic on the program was "Pyelography," the official paper being presented by Prof. Carlo Ravasini of Trieste. The roentgen examination of the urinary tract is based on certain technical procedures by which one is able to throw the picture of the tract on the roentgenographic screen. These procedures consist in the filling of the urinary tract with a medium introduced directly with instruments (termed ascending, retrograde or instrumental pyelography), or in its filling by the physiologic route. In the latter case, use is made of the kidney itself as the eliminator of the opaque medium, which is introduced into the organism by the intravenous, oral or rectal route (descending or extravesical pyelography; pyelography by elimination). Ascending pyelography, proposed first in 1906 by Völker and von Lichtenberg, has proved to be a valuable diagnostic means of urologic research, and is now accepted by all and widely used. The technic, the indications and the interpretation of the results of this method of research were then discussed with considerable detail. With the discovery of organic iodine salts harmless for the organism (iopax, or sodium 2-oxo-5-iodo-pyridine-N-acetate), the technic has undergone a notable improvement in comparison with the employment of other contrast mediums, such as the bromides and the iodides. The method of instrumental pyelography is, however, wearisome and sometimes painful for the patients. There are frequent cases in which its execution is absolutely impossible; for instance, in ureteral constrictions, in certain tumors of the prostate and the bladder, or when the ureter is not visible, owing to tuberculous cystitis, hematuria, fistulas and the like.

Attempts have been made to avoid the disadvantages and the inconveniences inherent in this method by the use of a substance opaque to roentgen rays, which, when introduced into the organism by the extravesical route, is eliminated from the kidneys in such a manner as to render the urinary passages nontransparent without being harmful to the organism as a whole or to the

renal emunctory in particular. The investigations in this direction, begun in 1906 by Völker and von Lichtenberg, have been crowned with success only recently, but today descending pyelography is a means of research regularly introduced into clinical practice. The first product employed for this purpose was prepared in 1928 and composed of urea and sodium chloride. Today sodium 2-oxo-5-iodo-pyridine-N-acetate (iopax) is preferred, as it causes no accidents of a toxic nature. This product is perfectly tolerated by man and no symptoms of iodism have ever been observed. Sometimes its introduction into the circulation by the intravenous route produces unpleasant symptoms (sense of heat, thirst, cold; rarely vomiting and rise of temperature), but these are slight if care is taken that the injection is made slowly and that the dose is less than that given by the supply house (40 Gm. in 100 cc. of water). Only grave renal insufficiency, especially if combined with hepatic insufficiency, constitutes a contraindication to the use of iopax. As a rule, for an intravenous pyelographic test three roentgenograms taken respectively fifteen minutes, forty-five minutes and an hour and a quarter after the injection are sufficient.

In cases of good renal functioning, the image of the parenchyma, the calices, the pelvis and the ureters is plainly visible in a few minutes, and in about twenty minutes the shadow of the bladder appears on the screen. The nephrogram and the pyelogram, and their intensity and amplitude, do not always appear equal on the two sides, even though the kidneys are both normal. A variation in the morphologic aspect of the organ may occur, depending as to whether, on the arrival of the opaque substance, the organ is in a state of repose or in a state of peristaltic activity. The intravenous pyelography test usually gives results similar to those obtained with the indigo carmine test, except in some cases of renal tuberculosis, in which the outcome of the two tests, according to the personal experience of the speaker, is opposed. The images obtained with the descending pyelography test are often inferior in distinctness and richness of detail to those obtained by the retrograde route; but the descending method has the advantage of revealing not only the anatomic but also the functional conditions, and, in addition, by reason of its diverse behavior in various cases (moment of appearance, regional differences in the shadows, and also complete absence of shadows), it will often give valuable diagnostic information. Another advantage of the descending method is that the filling of the cavities corresponds to the physiologic filling of the urinary passages, and all the factors inherent in the ascending methods, which may alter the form of the pelvis, the calices and the ureters, are eliminated. Descending pyelography cannot, however, completely replace retrograde pyelography and the other tests of urologic research but is valuable in that it supplements other tests and may be used in conjunction with them.

Many further communications were presented on the official topic. Dr. Alesio, having applied endovenous urographic tests to children in the Clinica pediatrica and the Ospedale infantile of Turin, has established that the doses of iopax to be employed in such patients should be proportional to the body weight (1:2,000); also the quantity of the solvent varies in proportion to the weight. In normal kidneys, he obtained only fragmentary images of the excretory passages, which fact he attributed to the rapidity with which normally iopax is eliminated, whereas in the presence of constrictions of the ureters he secured complete images of the calices, pelvis, ureters and bladder.

Ascoli of Milan reported his results in his personal series of 100 cases of descending urography in which he employed iopax. Contrary to the opinion of Professor Ravasini and other authors, he considers that the average time after which the best radiogram is obtained is not from thirty to forty minutes but is about ninety minutes.

Gortan announced the results of his first experiences with endovenous pyelography, performed with a sodium salt of mono-iodo-methanesulphonic acid, proposed recently by Bronner at the radiologic congress in Berlin. To obtain good radiographic images it suffices to inject a solution composed of 20 Gm. of this sodium salt of mono-iodo-methanesulphonic acid in 100 cc. of water. The preparation is well tolerated, and is contraindicated solely in cases of grave renal insufficiency.

A communication presented by Dr. Bonaccome on aseptic renal bilateral pyuria awakened a lengthy discussion of the subject. All the speakers were agreed that it would be more accurate to speak of pyuria, in which the pathogenic agent was not demonstrable, rather than of truly aseptic pyuria.

Sas gave the results of his research on the pathogenesis, pathologic condition and treatment of hemorrhagic cystitis and showed, on the basis of observations on seventy cases of cystitis in females, that so-called spontaneous cystitis is in reality an infection due to micro-organisms. Cholecystitis is, however, usually secondary to diseases of the upper urinary passages, the reproductive organs or the adnexa.

De Gironcoli reported a case of total cystectomy due to cancer of the bladder, in which the bladder was replaced by a loop of the intestine, according to the method of Makka Lengemann. Several further communications were presented. Bari was chosen as the meeting place for the next congress. The chief topic on the program will be: "Diseases of the Neck of the Bladder, Exclusive of Hypertrophy of the Prostate and Tumors of the Prostate." Prof. Carmelo Bruni of Naples was elected president of the Società italiana di urologia.

Aiding Children with Anterior Poliomyelitis

The minister of the interior has issued instructions to the Opera nazionale per la protezione della maternita e dell'infanzia with reference to the aid to be given children affected with acute anterior poliomyelitis, not only during the disease proper but also afterward for the correction of paralysis. The minister emphasizes the need of the hospitalization of young patients, as he considers that only in suitable surroundings can they obtain all the therapeutic aid that is needed to prevent the manifestations of paralysis and to reduce the damage to a minimum if paralysis should develop.

Of greater importance, from the sanitary and social points of view, is the aid to be given children who have already overcome the disease but in whom there are evidences of paralysis and deformity of the limbs. Since many of these children are curable and can be trained for work, they should receive the proper orthopedic treatment, and, when necessary, they should be admitted to orthopedic institutes for the gradual retraining of the limbs.

Meeting of the Ophthalmologic Society

The Società italiana di oftalmologia held its regular session recently in Rome in the quarters of the Clinica oculistica della università. It was decided to merge this society with the Associazione oftalmologica, which, under the name of Società oftalmologica italiana, will hold sessions in Rome and will hold an annual congress in the city that shall be selected by the assembly. Professor Ovio, director of the Clinica oculistica in Rome, was chosen president of the new merger.

At the opening session, the prizes for 1930 were awarded, the largest (Cidonio, 7,000 lire) having been bestowed on Professor Favaloro of Catania, while the Turbano prize went to Dr. Scalzitti for his work on "The Early Diagnosis and Treatment of Orbital Complications in Diseases of the Nasal Sinuses." At the next congress the international Cirincione prize of 20,000 lire will be reestablished. Many communications were presented. Professors Addario, Cattaneo and Favaloro discussed heliotherapy as applied to trachoma; Professor Rinaldi spoke on the behavior of the refraction index of the crystalline lens during fetal life; Dr. Strampelli took up the mechanism of the reparation of Descemet's membrane.

Marriages

ALBERT MURRAY DEARMOND, Indianapolis, to Miss Bonnie Kathleen Moffett at Greencastle, Ind., May 27.

WILLIAM PRICE BITTINGER, Summerlee, W. Va., to Miss Susannah Brient of Englewood, Tenn., May 27.

GEORGE PHILLIPS REYNOLDS, Boston, to Miss Ruth Sears Cheney of South Manchester, Conn., June 6.

W. BERAN WOLFE to Miss Florence Topal, both of New York, June 6.

ROWLAND RICHARDS to Miss Jean Phillips, both of New York, June 6.

Deaths

Hobart Amory Hare ⊕ Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1884; member of the Association of American Physicians and the Associated Anesthetists of the United States and Canada; professor of children's diseases at his alma mater in 1890; professor of therapeutics and diagnosis, 1891-1922, and since 1922 Sutherland M. Prevost professor of therapeutics, materia medica and diagnosis, Jefferson Medical College of Philadelphia; author of "Practical Therapeutics," "Practical Diagnosis," "Mediastinal Disease," and others; editor of "A System of Therapeutics," and "Medical Compilations and Sequels of Typhoid and Other Fevers"; aged 68; died, June 15, in the Jefferson Hospital.

Charles North Dowd ⊕ Saratoga Springs, N. Y.; Medical Department of Columbia College, New York, 1886; formerly professor of clinical surgery, Columbia University College of Physicians and Surgeons; member of the American College of Surgeons and the American Surgical Association; at various times on the staffs of the Roosevelt Hospital, Memorial Hospital, St. Mary's Free Hospital for Children, New York, the Lulu Thorley Lyon Home for Crippled Children, Claverack, the Richmond Memorial Hospital, Princess Bay, Staten Island, and the Saratoga Springs (N. Y.) Hospital; aged 73; died, May 24.

John Leslie Shepard ⊕ Colonel, U. S. Army, retired, Erie, Pa.; Rush Medical College, Chicago, 1893; entered the army as an assistant surgeon in 1902 and was promoted through the various grades to that of colonel in 1928; served during the World War; retired for disability in line of duty in 1930; member of the American College of Surgeons; aged 60; medical director of the Hamot Hospital, where he died, May 23, of carcinoma of the head of pancreas.

George Edward Deely ⊕ Brooklyn; Columbia University College of Physicians and Surgeons, New York, 1900; member of the American College of Surgeons; ophthalmologist, otologist and rhinologist to the Hospital of the Holy Family, St. Mary's Hospital, St. Charles Hospital for Crippled Children, and the Brooklyn Home for Blind and Defective Children; aged 59; was stabbed to death, June 2, by his servant.

Benson Ambrose Cohoe ⊕ Pittsburgh; University of Toronto Faculty of Medicine, Toronto, Ont., Canada, 1901; professor of applied therapeutics, University of Pittsburgh School of Medicine; served with the Canadian Army Medical Corps during the World War; on the staffs of the Western Pennsylvania Hospital and St. Francis Hospital; aged 56; died, May 26, of cerebral hemorrhage.

Charles C. Clancy, Port Huron, Mich.; Queen's University Faculty of Medicine, Kingston, Ont., Canada, 1883; member and past president of the Michigan State Medical Society; past president of St. Clair County Medical Society; formerly member of the school board; on the staff, and since 1920, president of the hospital board, Port Huron Hospital; aged 72; died, May 19, of angina pectoris.

Joseph Nicholson Barney, Fredericksburg, Va.; Medical College of Virginia, Richmond, 1893; member of the Medical Society of Virginia; served during the World War; on the staff of the Mary Washington Hospital; aged 64; died, April 30, in the Walter Reed General Hospital, Washington, D. C., of arteriosclerosis.

Benjamin Alfred Ledbetter, New Orleans; Medical Department of the Tulane University of Louisiana, New Orleans, 1892; member of the Louisiana State Medical Society; formerly member of the state board of health; aged 62; died, May 15, in the Touro Infirmary, of chronic myelogenous leukemia.

Harvey Mitchell Anthony ⊕ Gary, Ind.; Indiana University School of Medicine, Indianapolis, 1927; formerly assistant professor of anatomy at his alma mater; on the staffs of the Methodist Episcopal Hospital and St. Mary's Mercy Hospital; aged 41; died suddenly, May 18, of heart disease.

Marshall Edgeworth Gowland, Milton West, Ont., Canada; University of Toronto Faculty of Medicine, 1905; for two years member of the town council; medical officer of health for the town, and jail surgeon; aged 51; died, April 8, in the Hamilton (Ont.) General Hospital.

Arthur Clifford Selmon ⊕ Battle Creek, Mich.; American Medical Missionary College, Chicago, 1902; member of the American College of Physicians; formerly a medical missionary in China; aged 53; died suddenly, May 16, of chronic fatty degenerative myocarditis.

Edmond Newell Nelson, Watertown, S. D.; University of Minnesota Medical School, Minneapolis, 1926; member of the South Dakota State Medical Association; on the staff of the Luther Hospital; aged 31; died, May 7, of pneumonia and diabetes mellitus.

Theodor Thomas Blaise, Mason City, Iowa; Missouri Medical College, St. Louis, 1887; member of the Iowa State Medical Society; formerly member and president of the board of education; aged 72; died, May 15, in a local hospital, of heart disease.

Simeon Elijah Duke, Newark, N. J.; Fordham University School of Medicine, New York, 1918; member of the Medical Society of New Jersey; aged 45; died, May 16, in the Beth Israel Hospital, of heart disease, following an operation for appendicitis.

Francis H. Erwin, Freemansburg, Pa.; College of Physicians and Surgeons, Baltimore, 1888; member of the Medical Society of the State of Pennsylvania; aged 72; died, March 31, in St. Luke's Hospital, Bethlehem, of cardiorenal disease.

Sylvester S. Kring, Johnstown, Pa.; Jefferson Medical College of Philadelphia, 1888; member of the Medical Society of the State of Pennsylvania; aged 67; died, March 22, of diabetes mellitus and cardiovascular disease.

Freeman Floyd Cobb, Marianna, Pa.; Kentucky University Medical Department, Louisville, 1906; member of the Medical Society of the State of Pennsylvania; aged 53; died, February 18, of an overdose of morphine.

Henry Lane Williams ⊕ Minneapolis; University of Pennsylvania School of Medicine, Philadelphia, 1895; from 1900-1921 football coach at the University of Minnesota; aged 62; died, June 14, of heart disease.

Baxter L. Thompson, Jena, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1884; member of the Louisiana State Medical Society; aged 68; died, May 1, of heart disease

William Little Davies, Brunswick, Tenn.; Vanderbilt University School of Medicine, Nashville, 1878; aged 74; died, May 4, in Walls, Miss., of myocarditis and muscular rheumatism.

Charles Joseph Laird, Southampton, Ont., Canada; University of Toronto Faculty of Medicine, 1893; died, April 9, in the Owen Sound (Ont.) General Hospital, of pneumonia.

Francis M. Hines, Auburn, Ind.; Fort Wayne College of Medicine, 1892; member of the Indiana State Medical Association; bank president; aged 69; died, April 12, of nephritis.

John Walter Wilkins ⊕ Seattle; Medico-Chirurgical College of Philadelphia, 1896; aged 61; died, April 28, in St. Luke's Hospital, of chronic pneumonia and chronic cholecystitis.

Thomas Gustus Hill ⊕ Houston, Texas; College of Physicians and Surgeons, Dallas, 1905; aged 47; died, April 25, in the Baptist Hospital of uremia and chronic nephritis.

Jennie Medley, Philadelphia; Homeopathic Medical College of Missouri, St. Louis, 1887; aged 64; died, March 31, of dilatation of the heart.

George H. Young, Elkhorn, Wis.; Bennett College of Eclectic Medicine and Surgery, 1881; aged 78; died, May 5, of valvular heart disease.

William Torrance Jones ⊕ Atlanta, Ga.; University of Georgia Medical Department, Augusta, 1890; aged 60; died, March 18.

William Preston Hicks, Birmingham, Ala.; Birmingham Medical College, 1913; aged 42; was shot and killed, April 30.

Peter T. Oliphant, Bloomington, Ind. (licensed, Indiana, 1897); aged 82; died, May 5, of heart disease.

Correspondence

CHEMICAL RECTAL STRICTURE

To the Editor:—In connection with Doctor Rosser's article, "Chemical Rectal Stricture" in THE JOURNAL, May 23, may I call attention to one by myself, "Camphorated Oil Tumors" which appeared in THE JOURNAL, Jan. 7, 1922, as well as two others, "Experimental Production of Paraffin Oil Tumors in Monkeys," in the February issue of the *Archives of Dermatology and Syphilology*, and "The Danger of Liquid Petrolatum in Parenteral Injections," in THE JOURNAL, June 16, 1923?

In the last paper, it was pointed out that the dangers were present whether the material was injected into the skin, scrotum or serous cavities and that injections of oil are made even into the larynx and lungs. Dr. Rosser has added another location.

I am prompted to write you mainly to supply reference to the work already done in the skin which has thrown light on the nature of the reaction and the pathology of the disorder, information that does not appear to be available to the proctologist. The oil alone can account for symptoms; phenol or other chemicals need not be invoked.

FRED D. WEIDMAN, M.D., Philadelphia.

APPROVAL OF HOSPITALS IN CANADA FOR INTERNSHIP

To the Editor:—For some years a list of those hospitals on this continent which have been approved for internship has been prepared and issued by the Council on Medical Education and Hospitals of the American Medical Association. Arrangements have now been completed whereby this service for Canada will be assumed by the Department of Hospital Service of the Canadian Medical Association. After considerable study and deliberation a basis of approval has been formulated and adopted and copies of this basis of approval have been sent recently to all general hospitals in Canada with a capacity of 100 beds or over.

The basis of approval as finally prepared sets a very high standard of internship service and should prove welcome to senior students and recent graduates of Canadian and American medical colleges desiring to take internship in Canadian hospitals. In a general way the basis of approval is very similar to that adopted by the Council on Medical Education and Hospitals of the American Medical Association but incorporating certain modifications considered advisable to meet hospital customs in Canada. The basis of approval requires that the hospital shall have a clinical laboratory under the direction of a competent and properly qualified pathologist, a medical library for the use of interns and staff, and proper living quarters for the interns. Autopsies must be performed in at least 10 per cent of the deaths occurring in the hospital, histories must be maintained and records must be carefully preserved. The medical staff is expected to be properly organized, to hold clinical meetings and staff conferences (either as a whole or as separate departments) and to make every effort to facilitate the work of the interns in the various services.

These various requirements are outlined in the basis of approval, copies of which may be obtained from the secretary of the Department of Hospital Service of the Canadian Medical Association, Dr. G. Harvey Agnew, of 184 College Street, Toronto.

A number of the medical schools in Canada require the internship year before granting a medical degree, while others do not include the internship as part of the undergraduate course, such practical work being taken after graduation. It is not proposed to interfere with any arrangement made between a medical college and a hospital for these undergraduate internships, as such a relationship is a matter of arrangement between the medical college and the hospital concerned. This approval of hospitals for internship has no relationship with, nor is it designed to replace, the standardization program of the American College of Surgeons, although many of the requirements are very similar. The latter program is concerned with the general improvement of the professional and administrative services provided for the care of the patients by hospitals irrespective of size, while this work, undertaken by the Canadian Medical Association, is concerned entirely with the selection of those hospitals which offer adequate facilities for internship.

G. HARVEY AGNEW, M.D., Toronto.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

VACCINATION AGAINST SMALLPOX

To the Editor:—I recently saw a skin eruption in a girl, aged 18 years, who had been successfully vaccinated for smallpox eighteen months ago. I made a diagnosis of chickenpox. Later, the entire family, including the parents, came down with a disease which when seen by another physician was diagnosed as smallpox. The latter persons became ill from fourteen to fifteen days after the vaccinated girl was taken ill. The physician informed the family that they had contracted smallpox from the girl who had been successfully vaccinated eighteen months before. Can you give me statistics as to the number of authenticated cases of smallpox developing so soon after a successful vaccination? The physician stated that smallpox could be definitely diagnosed by obtaining pus from a smallpox pustule, placing it on a slide, staining it, and examining it under the oil immersion lens of the microscope. This is news to me, as I have not heard that the causative agent has as yet been definitely isolated. Kindly omit my name and address.

M.D., Texas.

ANSWER.—Immunity resulting from a successful inoculation of vaccine virus varies with different individuals. Some years ago, Kitasato (THE JOURNAL, March 25, 1911, p. 889) published the results of revaccination of 951 persons, showing that in some cases the immunity acquired from the first vaccination had disappeared in less than a year, as indicated by a second successful take:

After	1 year,	13.6 per cent
After	2 years,	32.9 per cent
After	3 years,	46.6 per cent
After	4 years,	57.3 per cent
After	5 years,	51.5 per cent
After	6 years,	63.8 per cent
After	7 years,	72.5 per cent
After	8 years,	80.0 per cent
After	9 years,	85.0 per cent
After	10 years,	88.6 per cent

Lescohier (THE JOURNAL, Aug. 16, 1913, p. 487) observed 251 revaccinations, finding that among 7 persons vaccinated within the previous year 2 showed successful takes, 28 per cent; 12 vaccinated within two years, 33 per cent takes; 19 vaccinated within three years, 48 per cent takes. Other investigators have reported similar figures.

It is probable that the administration of vaccine virus renders a greater degree of protection against infection with smallpox than it does against revaccination with vaccine virus. At least, cases of smallpox appearing within two or three years after a successful take are rare. A few, however, have been reported. In Kansas City, in the epidemic of 1922-1923, there were two cases of smallpox in persons who were vaccinated two and a half years previously and who exhibited good scars (Leake and Force: THE JOURNAL, Sept. 29, 1923, p. 1072). In the Denver epidemic of the same period, one case was reported in a child who had been successfully vaccinated seven months previously, but the diagnosis was doubtful (Sharpley, *Am. J. Pub. Health* **13**:222 [March] 1923).

In the United States Navy, 77 cases of smallpox occurred in 1922, among them 12 in men who had been successfully vaccinated within periods of fifteen months to two years (*U. S. Nav. M. Bull.* **19**:371 [Sept.] 1923).

Immunity acquired by vaccination is lost sooner in the Negro race than in the white race. It is estimated that while protection in white persons lasts from seven to ten years, it is largely lost in the Negro in four years. In Detroit in 1920 the smallpox rate was four times greater in the Negro than in the white race (*Am. J. Pub. Health* **11**:658, 1921).

Various laboratory tests have been reported from time to time for the diagnosis of smallpox. The most satisfactory is the method devised by Tieche and developed by Force and Beckwith (THE JOURNAL, Aug. 14, 1915, p. 588), Hull and Nauss (*Am. J. Pub. Health* **16**:101 [Feb.] 1926), Defries and McKinnon (*Am. J. Hyg.* **8**:107 [Jan.] 1928) and others whereby material from the suspected lesion is injected intradermally into a rabbit immunized against smallpox; if the patient was infected with smallpox, an allergic reaction appears in the rabbit.

TOXICITY OF CARBON TETRACHLORIDE

To the Editor:—I have a patient who has taken carbon tetrachloride. He has been deeply jaundiced, had nausea and vomiting and a few bloody stools. Will you be kind enough to let me have the following information: 1. The lethal dose of carbon tetrachloride for an adult. 2. What are the toxic effects of carbon tetrachloride? 3. What treatment should be pursued?

WYNDHAM B. BLANTON, M.D., Richmond, Va.

ANSWER.—1. The minimum lethal dose may be placed at 3 cc. (45 minims). This is the average dose originally recommended. Even though this dose has caused only 1 death in 50,000 persons, and the fatalities were in alcoholic addicts or in feeble individuals, the average dose of carbon tetrachoride may be placed at 2.5 cc. (40 minims), which is best taken in capsules or in a tablespoonful of water. It should be used with all possible precautions, such as avoiding preliminary starvation, as well as giving it on a full stomach; also not giving fats or alcohol with it or shortly after. It is best administered in the morning, at breakfast time, an adequate dose (30 Gm.) of magnesium sulphate, dissolved in 250 cc. of water, being given two hours later, and a light fat-free meal four to five hours later.

2. The most frequent ill effects are headache and dizziness, which may continue for days. Somnolence is not uncommon. Nausea and vomiting are rare, purgation more common. Large doses cause stupor with mydriasis. Jaundice, due to widespread fatty degeneration of the liver with central necrosis of the lobules and subcapsular hemorrhages, is the most dreaded toxic effect, as it has led to quite a number of fatalities with symptoms of acute yellow atrophy of the liver. It is believed that previously damaged livers, as those of the alcoholic addict, are particularly predisposed to this disaster. Uncontrollable intestinal hemorrhages have occurred.

3. If the drug is still in the stomach, lavage is indicated. Otherwise, magnesium sulphate purgation will have to be relied on for evacuation. Unfortunately, there is no antidote. As the effects of the poison are similar to those of chloroform, and dextrose has been found protective against liver degeneration in chloroform poisoning, one would be inclined to consider dextrose as of probable value in carbon tetrachloride poisoning. It has recently been suggested that calcium deficiency is a predisposing factor to such poisoning; and, on the basis of this, calcium chloride or parathyroid administration has been recommended.

UNHEALED ULCER OF LEG

To the Editor:—A man, aged 32, who had a positive Wassermann reaction a few years ago, which now is negative, was in a wreck on a railway engine and got scalded on his leg. Since that lesion healed he got cut with a shovel on the same leg and he has an ulcer that has been there for four years and seems to be getting worse. I have tried ointments and powders as well as tincture of iodine and 10 per cent mercurochrome-220 soluble, but nothing that I have tried has caused it to heal. This ulcer is 10 inches long and about 2½ to 3 inches wide. It has an awful odor to it and in spite of all that I can find in the way of deodorants they do not seem to have helped the ulcer or the odor. I am writing to ask you to suggest something that will do away with the odor and, if possible, heal the ulcer.

M.D., Georgia.

ANSWER.—So far as the inquiry indicates, this patient is being treated symptomatically, without diagnosis. The results, of course, are unsatisfactory. Among the possibilities that should be investigated, as suggested by the description, are chronic infected traumatic ulcer, with or without exaggeration by stasis due to varicosities; malignancy developing in the scar or at the site of an old burn; seronegative late cutaneous syphilis; seronegative late syphilis associated with osteomyelitis and necrosis of bone; tuberculosis; hemangio-endothelioma; self-inflicted or self-maintained lesion in a compensation case. None of those possibilities can be adequately dealt with by the procedures described, nor are the necessary data for differentiation given. It would seem to be desirable to place this patient in a hospital under proper observation. A rest in bed would be essential to recovery from an ulcer of this type, especially if there is marked evidence of a stasis factor. A biopsy should be taken from a properly selected portion of the periphery of the ulcer and perhaps from several portions, to determine the question of malignant degeneration. Repetition of the Wassermann test by different laboratories and a therapeutic test may be necessary to decide the question of seronegative late syphilis. A roentgenologic examination of the adjacent bones would assist materially in determining the possibility of syphilis, tuberculosis and malignant change as well as chronic septic osteomyelitis. The history of a previous cutaneous lesion of the hemangio-endothelioma type might be obtained by careful inquiry. So far as the local measures are concerned, proper cleansing, saline dressings and perhaps the use of a local disinfectant, such as surgical solution of chlorinated soda or dichloramine, rather than destructive agents such as tincture of iodine, might be more effective. In fact, rest, regular dressing, attention to the patient's general hygiene and the simpler types of application of a less irritant variety are likely to be quite as effective as the stronger disinfectants. Malingering should be carefully watched for and a fixed dressing used if necessary. It goes without saying that the possibility of a diabetic complication should be eliminated by examination of the urine. While the patient is confined to bed, a simple therapeutic test with potassium iodide might be performed; but if there is any reason to suspect a mycotic factor, as in blastomycosis, such a test will yield a nonspecific effect. If a malignant condition can be effectually eliminated, thiocresol can be used, as suggested by Reimann, to stimulate granulation. After the appropriate investigations for diagnosis are made, this patient, if necessary, might be released to office care and the healing completed under supportive dressing, such as the Unna gelatin boot, if the lesion is in an appropriate situation, and the newer types of flexible adhesive plaster dressings. A textbook might readily be written about this case as an example, and in fact the reading of one of the newer textbooks on traumatic and emergency medicine and surgery might provide some helpful ideas.

ALLERGIC PHENOMENA

To the Editor:—A young woman having a persistent urticaria for the past eight months thinks she can produce attacks from eating milk chocolates, oranges, grapefruit and chewing Dentyne gum. She asks whether these have a common chemical element that may also be common in other foods? Numerous treatments have been tried without relief. Any suggestions from you will be appreciated. Please omit name.

M.D., Colorado.

ANSWER.—Some persons are highly sensitive to certain chemical compounds but give no reaction to closely related compounds. For example, one may be sensitive to chicken feathers but to no other feather. On the other hand, one may be sensitive to a certain chemical compound and to many related compounds. For example, one may be sensitive to all grass pollens although the chemical structure of these pollens varies considerably. Then, too, one person may be sensitive to many different unrelated compounds. The same principles apply to foods.

Of the foods named in the query, oranges and lemons have some common chemical constituents while the other two are entirely different from these and each other. The causative agent in gum may be the flavor or any other constituent. Milk chocolates contain many different constituents, any one of which may be a factor in urticaria.

Urticaria may be caused by so many different contacts or conditions that exhaustive studies must be made in some cases before the etiology is discovered. The chapter on urticaria in Dr. Rackemann's "Clinical Allergy" may give the help needed.

TREATMENT OF SYPHILIS

To the Editor:—I should like your opinion on this subject: A man, aged 46, with tertiary syphilis, giving a 4 plus Wassermann reaction and showing many of the manifestations of neurosyphilis, has never been treated. What are the chances of his wife not having it, they having been married ten years? Out of an extreme anxiety to be certain, she has had about ten Wassermann tests (from four different laboratories), two of which were 2 plus. There are no symptoms. Would you advise a spinal puncture, or do you think it safe to assume that she is not infected? Please omit name.

M.D., Indiana.

ANSWER.—The chances of infection of the wife in the case described are mainly dependent on the interval separating the husband's infection from the date of his marriage. If this was greater than five years, it is possible that the wife has escaped even though the husband had no prior treatment. On the other hand, it is hardly safe, especially since the husband is neurosyphilitic, to trust to this criterion. A series of ten Wassermann tests taken at random among various laboratories may show two partial positives which are false. None the less, under these circumstances it is wiser to accept them as probably true positives and to perform a complete physical, serologic and spinal

fluid examination on the wife. Even with such an appraisal, if the wife is the mother of several children, she may be infected but show no definitive signs. For her own protection, particularly in view of the frequency of conjugal neurosyphilis, the spinal fluid examination is recommended.

VALLERINO AND WORK ON PROTOZOA

To the Editor:—Can you answer the following questions relative to a review recently published in THE JOURNAL? 1. With regard to the work of Vallerino, please give reference to an article that summarizes Vallerino's work for one not an x-ray worker. 2. Where can I find a good consideration of diet in these conditions? 3. Reference to protozoa in the liver.

RAWSON J. PICKARD, M.D., San Diego, Calif.

ANSWER.—

1. Proceedings of the International Conference on Health Problems in Tropical America, 1924, and in United Fruit Company Publications, Boston.
Smithies, Frank: *Am. J. Trop. Med.* **6:** 1 (Jan.) 1926.
2. Publications of United Fruit Company, Boston.
Smithies, Frank: Present-Day Treatment of Intestinal Protozoiasis and Factors That Determine Its Efficacy, THE JOURNAL, July 21, 1928, p 152.
3. Fanthon, Stevens and Theobald: The Animal Parasites in Man, New York, William Wood & Co., 1930.
Dobell & O'Connor: The Intestinal Protozoa of Man, New York, William Wood & Co., 1921.
Hemmeter, J.: *Proc. Am. Gastro-Enterol. A.* **23:** 168, 1920.
Lyon: *Tr. Am. Gastro-Enterol. A.* **28:** 262, 1925.
Kantor, J. L.: Lamblia (Giardia) Infection Associated with Cholecystitis, *Arch. Int. Med.* **32:** 693 (Nov.) 1923.
Simon, S. K.: Lamblia Intestinalis Infestation and Its Treatment, *South. M. J.* **15:** 458 (June) 1922
Smithies, Frank: Parasitosis of Bile Passages and Gallbladder, *Am. J. M. Sc.* **176:** 225 (Aug.) 1928.
Contributions to Medical Science, dedicated to Aldred Scott Warthin, Ann Arbor, Mich., George Wahr, 1927.

ATROPINE IN STUDYING MYOPIA

To the Editor:—What are the advantages, if any, of the use of atropine in the examination of myopic eyes? When and under what conditions would you recommend its use? Please omit name.

M.D., Massachusetts.

ANSWER.—The use of atropine in the refraction of a myopic eye has the advantage that there results a complete paralysis of accommodation, which, from theoretical considerations, forms a sine qua non for the primary correction of myopia. Although the ciliary muscle in myopic persons is not as well developed as in persons with hyperopia, still there is apt to be a spasm of accommodation, resulting in a seemingly higher myopia than the individual actually possesses. Therefore, relaxation of the ciliary muscle is really necessary for accurate refraction, particularly in the lower degrees of myopia. Practically, homatropine suffices to relax the ciliary muscle in myopic persons except in younger children, and the use of atropine for refraction in myopia can be limited to children of about 8 years of age or less.

SULPHURATED BATHS FOR CHRONIC RHEUMATISM

To the Editor:—I was asked the other day about baths containing sulphurated potassa used in Germany and France for chronic rheumatism. Can you give any information on the subject? How would they be given? If you do not think well of this, what preparation of sulphur would be best for baths for chronic rheumatism? If sulphur baths are not the best baths for chronic rheumatism, what would be best? Please omit name.

M.D., Louisiana.

ANSWER.—From 50 to 150 Gm. of sulphurated potassa is used for a full bath, with the addition of a little hydrochloric acid to liberate hydrogen sulphide. Metal tubs must not be used because of the blackening caused by hydrogen sulphide. These baths are generally employed warm (97 F.) or hot (108 F.), are prolonged for from half an hour to as much as three to four hours, and are sometimes given twice a day. They are probably an efficient form of thermotherapy, combined with cutaneous irritation.

INJECTION OF DEXTROSE IN DIABETIC PATIENT WITH HIGH BLOOD SUGAR

To the Editor:—How would the intravenous injection of 4 ounces of dextrose solution probably affect the patient if given when the blood sugar is 208?

W. W. ADAMS, M.D., Los Angeles.

ANSWER.—The intravenous injection of 4 ounces of dextrose solution in a diabetic patient with a blood sugar of 208 would probably be a completely futile effort. The chances are that almost all of this dextrose would be excreted in the urine as such, and that it would not do the patient any good.

Council on Medical Education and Hospitals

COMING EXAMINATIONS

ALABAMA: Montgomery, July 14-17. Sec., Dr. J. N. Baker, 519 Dexter Ave., Montgomery.

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Denver, July 23. Sec., Dr. William H. Wilder, 122 S. Michigan Ave., Chicago.

CALIFORNIA: San Francisco, July 6-9. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

COLORADO: Denver, July 8-10. Sec., Dr. William W. Williams, 224 State Capitol Bldg., Denver.

CONNECTICUT: *Regular* (written and endorsement, respectively), Hartford, July 14-15 and July 28. Sec., Dr. Thomas P. Murdock, 147 West Main St., Meriden. *Homeopathic.* New Haven, July 14. Sec., Dr. E. C. M. Hall, 82 Grand Ave., New Haven.

DISTRICT OF COLUMBIA: *Basic Science.* Washington, June 29-30. *Regular.* Washington, July 13-14. Sec., Dr. W. C. Fowler, District Bldg., Washington.

MAINE: Augusta, July 7-8. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MASSACHUSETTS: Boston, July 14-16. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

NORTH DAKOTA: Grand Forks, July 7-10. Sec., Dr. G. M. Williamson, Grand Forks.

OREGON: Portland, July 7-9. Sec., Dr. C. J. McCusker, 1014 Medical Dental Bldg., Portland.

PENNSYLVANIA: *Written.* Philadelphia and Pittsburgh, July 7-9. *Practical.* Philadelphia, July 10-11. Sec., Dr. Charles D. Koch, Harrisburg.

RHODE ISLAND: Providence, July 2-3. Director, Mr. Lester A. Round, Room 319, State Office Bldg., Providence.

SOUTH DAKOTA: Sylvan Lake Hotel (P. O. Custer), in the Black Hills, July 21. Dir., Dr. H. R. Kenaston, Bonesteel.

UTAH: Salt Lake City, June 30–July 1. Director, Mr. S. W. Golding, 412 State Capitol Bldg., Salt Lake City.

WASHINGTON: *Basic Science.* Seattle, July 9-10. *Regular.* July 13-14. Dir., Mr. Charles Maybury, Olympia.

WEST VIRGINIA: Harpers Ferry, July 7-9. Sec., Dr. W. T. Henshaw, Charleston.

WISCONSIN: Milwaukee, June 30-July 2. Sec., Dr. Robert E. Flynn, 315 State Bank Bldg., LaCrosse.

Ohio Reciprocity Report

Dr. H. M. Platter, secretary, Ohio State Medical Board, reports 17 physicians licensed by reciprocity with other states and 2 by the endorsement of credentials at a meeting held April 7, 1931. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of California Medical School		(1908)	California
Georgetown University School of Medicine		(1926)	New York
Northwestern University Medical School		(1930)	W. Virginia
University of Illinois College of Medicine		(1930)	N. Carolina
University of Kansas School of Medicine		(1911), (1926)	Kansas
Kentucky School of Medicine		(1894)	Kentucky
University of Michigan Medical School		(1928), (1929, 2)	Michigan
Missouri Medical College		(1894)	Missouri
Creighton Univ. School of Med		(1921) New York, (1927)	Missouri
University and Bellevue Hospital Medical College		(1912)	New York
Jefferson Medical College of Philadelphia		(1904)	Penna.
Medical College of the State of South Carolina		(1925)	S. Carolina
Meharry Medical College		(1927)	Tennessee

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement of
Johns Hopkins University School of Medicine		(1924)	N. B. M. Ex.
University of Virginia Department of Medicine		(1928)	N. B. M. Ex.

Oklahoma March Examination

Dr. J. M. Byrum, secretary, Oklahoma State Board of Medical Examiners, reports the written examination held at Oklahoma City, March 10-11, 1931. Two candidates were examined, both of whom passed. Fifteen candidates were licensed by reciprocity and 1 candidate was granted a reregistration certificate. The following colleges were represented:

College	PASSED	Year Grad.	Number Passed
University of Louisville School of Medicine		(1930)	1
Washington University School of Medicine		(1929)	1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
University of Arkansas School of Medicine		(1928)	Arkansas
Rush Medical College		(1930)	Illinois
University of Illinois College of Medicine		(1910)	Iowa
University of Michigan Medical School		(1926)	Michigan
St. Louis University School of Medicine		(1922)	Missouri
University of Nebraska College of Medicine		(1929)	Nebraska
Temple University School of Medicine		(1927)	Michigan
Medical College of the State of South Carolina		(1914)	S. Carolina
Memphis Hospital Medical College		(1901)	Arkansas
University of Tennessee College of Medicine		(1929)	Tennessee
Vanderbilt University School of Medicine		(1928, 2)	Tennessee
Baylor University College of Medicine		(1929)	Texas
University of Wisconsin Medical School		(1928)	Kansas,
University of Toronto Faculty of Medicine		(1919)	N. Dakota

WHAT IS A UNIVERSITY WOMAN'S CLINIC? *

J. WHITRIDGE WILLIAMS, M.D.
BALTIMORE

Until recently, we had been very backward in this country in providing facilities for the care of women in labor and for practical obstetric training of students, as will be apparent when I tell you that when I graduated forty odd years ago I had seen only two deliveries, and one of them was in the patient's alley home; and yet I graduated first in my class and received the obstetric prize. Indeed, I think it safe to say that prior to the opening in 1888 of the Sloane Maternity in connection with the College of Physicians and Surgeons of New York there was not a single institution in the entire country especially erected and equipped for that purpose. The result was that while we had numerous gifted and sometimes eloquent teachers, there were no facilities for teaching practical obstetrics—much less for its scientific study, so that young men who wished to perfect themselves in that branch of medicine were compelled to go to Europe, and especially to Germany. Doubtless, at that time numerous small maternities were scattered through the country, which had been founded for purely philanthropic purposes and were usually limited to the care of respectable married women only, but were not utilized for the instruction of students. Early in the nineties, the New York Lying-In Hospital was opened, and for many years it and the Sloane Maternity were the only institutions in the country which approached in any way the continental ideals. Since then, conditions have slowly improved and particularly since the World War a number of institutions of varying degrees of excellence have been opened.

The first mention of an obstetric institution in Europe occurs in connection with the Hotel Dieu in Paris, where in the thirteenth century, during the reign of Saint Louis, a single ward for twenty-four patients was opened. This was quaintly described as being "in a retired and close place, for it stands to reason and is quite proper that women in child-birth should be in a retired and secret place and should not be visible like other sick persons." This "service des accouchiez" remained practically unchanged until the time of Francis the first, when it was enlarged, but even then we read that it was a cellar-like structure, "which was so low down that at high water the level of the Seine was one foot below the windows and two feet above the beds—from which came and any day might come serious inconvenience." It might be added that the patients slept four in a bed, and that no distinction was made as to whether they were sick or well. Indeed, the only great improvement effected prior to the French Revolution was to limit the number of patients to two in each bed, and to attempt to separate them by means of a plank down its center.

During the Revolution, the Maternité, as it was called, was removed to the Abbey Port Royal, where it still remains, and was made famous by the work of Madame La Chapelle and Baudelocque, and later by Tarnier. During that time, however, it was conducted as a school for midwives and was strictly closed to medical students and even to medical men unless they served as consultants. Indeed, it was not until 1745 that a chair of theoretical obstetrics for medical students was instituted at the University of Paris, and it was not until a hundred years later that clinical instruction for them became available.

In Great Britain, conditions were essentially the same, and it is interesting to recall that the inspiring courses of William Hunter and of Smellie were not given in the hospitals or medical schools of London but were private enterprises conducted without supervision on their own premises. Indeed, until comparatively recently there was no great development of obstetric clinics, with the single exception of the Rotunda Hospital in Dublin, which was founded by Dr. Bartholomew W. Mosse in 1745, which still remains as the largest obstetric hospital in the British Isles.

In Germany, on the other hand, things took a different course, and in 1730, when Johann Jacob Fried was appointed head of the Maternity of Strasbourg, he was able to persuade those in authority to permit its utilization for the training of medical students as well as of midwives. Furthermore, he so stimulated those working with him to extend the bounds of obstetric knowledge that he may be regarded as having organized the first woman's clinic in the world. He directed its activities for thirty-nine years, and built on such firm foundations that years later Osiander described it as "the mother school of all institutes of the kind in Germany."

In 1757, Fried's pupil Roederer organized the clinic at Göttingen and rendered it so famous that it became the model for all clinics founded in Germany up to the present time. Following Roederer, professorships of obstetrics and later clinics were organized in every German and Austrian university, so that from the middle of the last century each German university had its own woman's clinic, in which obstetrics and gynecology were taught and practiced by a single chief. Such clinics, in addition to facilities for the care of patients and the teaching of students, were provided with adequate laboratories for the study of scientific problems, with the result that a large part of our recent knowledge has been derived from that country. In addition, it should be noted that in Germany the choice of the professor has depended quite as much on his strictly scientific contributions as on his clinical capacity, with the result that younger men desiring academic preferment were forced to interest themselves in the study of scientific problems, which is in marked contrast to conditions obtaining in most other countries, where advancement depends on political activity or even on mere seniority of service.

With the present century, and especially following the World War, conditions have improved in this country and, in addition to the Sloane Hospital for Women, large clinics have developed in Montreal, Boston, Baltimore, Cleveland, Iowa City and possibly in San Francisco—and now this great institution is being opened, to be followed next year by the largest clinic of all in connection with the new medical center of Cornell University. All of these clinics are connected with strong universities, and some are at present, while others will probably become, real university woman's clinics. On the other hand, most of the medical schools of the country must still depend on small services in general hospitals for the obstetric training of their students, while a small number do not even have such affiliations.

At first glance the list of clinics just mentioned appears imposing; but when it is recalled that they represent only a small fraction of the medical schools of the country, it is apparent that we are woefully lacking in that respect, and I am fond of saying that we are probably not as well off today as was Germany shortly after the end of the Franco-Prussian War, and that we shall not be justified in claiming material equality with her until every university medical school has a real woman's clinic connected with it, which will be a tedious and expensive process. It is partly to this disparity that I am inclined to attribute a considerable part of the excessive maternal mortality which distinguishes this country, and it appears to me that insistence on this point should serve to stimulate women to realize what a part they can play in improving the situation, as insistence by them that they are entitled to as efficient medical service as in other countries should materially hasten the time when money will become available for building and endowing woman's clinics in connection with every good medical school.

* Read at the Dedication of the Chicago Lying-In Hospital, April 29, 1931.

What is a university woman's clinic? I would reply, an institution for the treatment of a large number of female patients suffering from the ills peculiar to their sex, both obstetric and gynecologic, and so equipped as to permit their greatest utilization for the teaching of students, and provided with a medical staff which is prepared to devote a considerable proportion of its time to the advancement of knowledge and to the discovery of new facts which will eventually be of value in the care of the sick.

In other words, a university woman's clinic has three main functions—the best possible care of patients, the training of students, and the prosecution of research—and it does not fulfil its full function if it fails in any one of these respects.

THE FUNCTION OF TEACHING

In the early years of my medical life it was necessary to expend much energy in persuading those responsible for the conduct of hospitals that the admission of students to their wards conduced to more effective treatment of the patients. At that time it was felt that the presence of students interfered with the best treatment and encroached on the privacy of the patients. Fortunately, that time has long since passed, and it is now universally recognized that the presence of students serves as the greatest possible stimulus to the members of the medical staff, as the constant presence of numbers of keen young men and women makes it impossible for those in charge to become lax or slipshod in the care of those entrusted to them. This being the case, the question arises as to how students shall be taught, and this brings us to differentiate types of teaching. Generally speaking, we distinguish between undergraduate and graduate teaching, the former being the instruction of medical students before graduation, and the latter after they have become doctors of medicine. Undergraduate teaching is relatively simple, as the course of instruction is compulsory and consists of required exercises in the classrooms, laboratories and dispensaries, together with a moderate amount of carefully supervised work in the wards and operating rooms. It should be understood that in no branch of medicine does such teaching train the student to be a capable practitioner but simply gives him the basis on which he may later perfect himself, if he so desires.

Graduate teaching, on the other hand, is much more complicated and is intended to serve two main purposes—first to train the newly graduated doctor to become a first rate practitioner, and second to encourage a relatively small number of men, who have already attained considerable technical efficiency, to advance the bounds of our knowledge and thus raise the general level of medicine.

With a great maternity hospital there should be no difficulty in training the first type of graduate; this is done principally by permitting a certain number to live in the hospital as interns, assistant residents and residents, where they serve as apprentices, and gradually assume increased responsibility as they go on. In my experience it requires four or more years of hospital residence to make a thoroughly competent practical obstetrician. As a result, only about one out of every four or five graduates who enter as interns can be expected to become a competent specialist, while those who serve for shorter terms go into general practice or complete their practical training elsewhere. In other words, an institution should be satisfied if it turns out a single competent specialist each year. It is important for the public to realize that such men are only at the beginning of their career and that many years of additional training and certain peculiar traits of mind and character are required before they become real scientists, and that such a status is rarely obtained before the age of 40, if ever.

Important as the training of competent specialists may be, to my mind the most important function of a university clinic is to train a small number of scientific obstetricians. Candidates for that type of instruction will be recruited from a fraction of those who have served a long residency, as well as from a small number of well trained men who are not satisfied with the intellectual returns from a life spent in practice. These are serious minded men and women who are anxious for a broader training to fit them to become teachers and eventual heads of institutions such as this. This means that they are prepared to spend an additional four to eight years in so perfecting themselves in the art and science of obstetrics and gynecology as to have fair prospect of becoming masters in the subject, and for that purpose the apprentice system just outlined does not suffice. Such men need not only additional clinical training but also an opportunty to immerse themselves in one of the various sciences which underlie the various branches of clinical medicine and surgery. Such graduate students should be members of the hospital and university staff, and hold such positions as associates, assistant professors and associate professors, and must be paid salaries proportionate to their abilities, and it is from the best of them that we expect the important research work which comes from the department.

THE MEANING OF RESEARCH

Generally speaking, research implies the attempt to find out something that is as yet unknown, and in the present state of medical knowledge effective results can be accomplished only by applying to practical medicine the technic involved in the so-called basic sciences—chemistry, physics, biology, physiology, pathology, embryology or bacteriology—and this implies that the research scholar must possess a fair mastery of one or the other of these sciences in addition to being a competent obstetrician or gynecologist. It furthermore implies that the institution must possess laboratories adequately equipped for the pursuance of such investigations and be prepared to spend whatever money is necessary for technical assistance and supplies.

It goes without saying that such men must be well prepared and reasonably gifted and must have made up their minds to forego any great financial reward. Consequently, salaries must be provided on which they can exist and which will eventually be increased sufficiently to permit marriage.

Such men should take part in the general teaching of the department and as they perfect themselves offer elective courses in the fields in which they are particularly interested. With clinical work, teaching and research, their entire time will be so occupied that they will be unable, even if they have the desire, to engage in outside private practice—in other words, they must inevitably be on the so-called full time or university basis. If they are of the proper type, they will regard such posts as great opportunities to prepare themselves to fill responsible posts elsewhere. On the other hand, not all good physicians are fitted for such posts, and if they do not possess the type of mind that will find happiness in devotion to work irrespective of financial reward they are bound to be unhappy and, consequently, relatively useless.

It is my conviction that it is from this type of graduate student that the leaders of the future will be recruited and it is imperative that those in charge treat them with fitting consideration.

I find that there is a tendency on the part of many practitioners to regard men who work in laboratories as mere technicians and to consider that it is their function to assist the practitioner in his work, as he holds that investigation in a laboratory unfits one for clinical activity. Doubtless this is sometimes the case, but if it is the rule we have been wasting our facilities. I know from my own experience that such is not the case, and that a combination of clinician and research worker produces the finest type of teacher and physician with which I am familiar. In this connection, it should always be borne in mind that the busy practitioner is usually a parasite on medical knowledge, and that many of the advances which

he so proudly claims as his own are really due to the type of man I have been describing. Furthermore, it should be realized that for practical purposes this type can be developed only within the walls of a real university, which does not consist merely of buildings but of a company of scholars, as President Gilman was so fond of saying, whose chief interest lies in the advancement of knowledge.

I have already indicated that in this country we are relatively poor in university woman's clinics, and now I do not hesitate to state that we are poorer still in men to head them, so that when a vacancy occurs in one of the existing clinics it is extraordinarily difficult to find an efficient chief. It is easy to find a competent practical obstetrician and gynecologist, much more difficult to find one who is in addition a competent teacher, but extraordinarily difficult to find one who combines these gifts with a love for research and the ability to imbue others with the same spirit. In other words, our country as yet has almost completely failed in developing the type of teacher who is able to develop a school of obstetrics and gynecology, such as happens relatively frequently in Germany.

This lack is not peculiar to obstetrics and gynecology but is perceptible in most other branches of medicine, as I know from experience in my own university that whenever the necessity arises for filling an important professorial post it is rare to find in the entire country more than one or two men who give promise of filling it in anything like an ideal manner. The result is that throughout the universities of the country many important posts have to be filled by men who we are sure are unlikely to rise above mediocrity. In my travels about the country during recent years, I have been impressed by the extraordinary development of beautiful and sumptuous buildings devoted to medical education, yet I am often depressed on learning the type of men who have been chosen to control their destinies. In other words, it appears to me that we are in danger of dissipating our energies in the construction of buildings and are failing to develop men, on whom success depends.

It is in part for this reason that I may have appeared to preach to you, for if this wonderful building fails to turn out a succession of the highest type of scientific obstetricians and gynecologists it will be a great disappointment to me and an evidence that it has failed to develop its highest potentialities. It is for this reason that I am so interested in its affiliation with the University of Chicago, as it is my experience that the highest type of medical man is rarely developed outside of a university atmosphere, and even there it is difficult enough.

Self-satisfaction and complacency appear to be a distinguishing earmark of American civilization, and we tend to delude ourselves into believing that our institutions are the best in the world, including universities and hospitals. One has, however, only to read Abraham Flexner's recent book to become convinced that our universities are full of sore spots, and I know that the same applies to most of our clinics. Many of them are beautiful architectually, but few of them are justifying their existence by their intellectual output, and the reason is that we are not developing broadly trained men.

I have already stated that the maternal mortality is higher in this country than in most other highly civilized states, being twice as high as in Great Britain and three times as high as in Scandinavia. The exact reasons I cannot give you, but I believe that it is in part attributable to defective medical education. Do you realize that two thirds of all the women dying in childbirth succumb to one of two causes—puerperal infection and toxemia? We know the cause of the former and how to prevent it, but when it does occur we can treat it with little more success than did our grandfathers. We can prevent the occurrence of many cases of toxemia by efficient prenatal care, yet we are entirely ignorant of its cause and so are obliged to treat our serious cases entirely empirically, and doubtless often wrongfully.

You will note in the cloisters of this hospital that eight escutcheons have been provided, seven of which have been filled by Dr. DeLee with the heads of prominent obstetricians from all parts of the world who have accomplished great things, but the eighth one has been left vacant, to be eventually filled by the head of the man who shall discover the cause of eclampsia. May it not remain long vacant, and I am sure that Dr. DeLee will endorse my hope that the discoverer may have been trained in this institution.

It would lead too far afield, nor is this the place, to enumerate the many conditions in obstetrics which are awaiting discovery and elucidation. But if any one could discover the cause of eclampsia, and thus save the lives of the 20,000 women who perish from it annually, it would constitute a service to mankind incomparably greater than caring for three or four thousand patients a year as you are planning.

Likewise, think of the boon that will be conferred on womankind when laboratory research shall have discovered a means of abolishing the pains of labor by a method that will not only be harmless but also without effect on the efficiency of the process.

Book Notices

TEXT-BOOK OF PATHOLOGY. By Robert Muir, M.A., M.D., Sc.D., Professor of Pathology, University of Glasgow. Second edition. Cloth. Price, $14. Pp. 872, with 501 illustrations. New York: Longmans, Green & Company, 1931.

The first edition of this book appeared in this country in 1924 under the imprint of the J. B. Lippincott Company. This is the first reprint of the second edition, which came out in 1929. The first edition had 774 pages and 443 illustrations. It sold in this country for $8.50. The present edition sells in this country for $14 and in the United Kingdom for 35 shillings. This great difference in prices is of course due in part to our new duty on imported books. That the price of the second edition has been set at $14 is regrettable because it undoubtedly will limit the sale in this country of a good textbook of pathology, written primarily for students of medicine by an experienced and successful teacher of pathology. The book deals mainly with the structural changes in disease, but the disturbances of function and the chemical and the experimental sides have not been neglected. Systematic bacteriology, diseases of special senses and the skin, parasitology and teratology are not considered. One chapter of twenty-three pages is devoted to infection, immunity and fever. The references are few and they cover only other books. This lack of references to basic articles would be disappointing to many American students who are accustomed to consult such articles. The index seems complete. The unusual names given tumors—cytoma, blastocytoma, plasmocytoma, desmocytoma, histioma—are annoying rather than helpful. Why complicate the introduction of the student to the study of tumors by designations that are not in common use? The book is based essentially on the author's own observations in pathologic anatomy. This one sees in the illustrations, all black and white, practically all original, and uniformly satisfactory because they illustrate well the conditions featured. Consequently the main field under consideration is covered thoroughly and adequately. The American student could profit greatly by the style—clear and direct, smooth and orderly.

VERERBUNG UND ERZIEHUNG. Herausgegeben von Günther Just. Cloth. Price, 14.60 marks. Pp. 333, with 39 illustrations. Berlin: Julius Springer, 1930.

There is an ever increasing tendency on the part of European physicians to interest themselves in the subject of inheritance and constitution. The line of cleavage between hereditary and acquired characteristics is losing its definiteness the more the opinions of various writers are becoming aired. The newer studies furnish information of the importance of intra-uterine environment on the development of the fetus and child. Environment is no longer the external world into which the child emerges at birth. It would appear that not alone the physical

but the psychic future of one's life is predestined by the characters of the chromosomes in the ovum and sperm, the intrauterine influences and the possession of hereditary "anlagen" which determine the ability to absorb that which may be of value in the subsequent development of the child and even those unhealthy tendencies which may prove its undoing. The several contributors to this volume develop this theme in a sequential manner. Just concerns himself mainly with the environmental hereditary "anlagen" which determine physical qualities. He differentiates between stabile and labile developmental processes, describes the development of the form and the peculiarities of the individual, the specific disposition to assimilate certain tendencies—healthy or unhealthy, the X chromosome in relation to sex and the importance of genes in determining the characteristics of the individual. Harnhart discusses the elements of environment, the constitution and the type of individual. Dresel speaks of the environmental and antagonistic influences that favor or harm the individual during childhood and adolescence. He raises the question as to whether unfavorable hereditary tendencies can be modified by favorable environment and training. Hoffman discusses Kretchmer's classification of individuals, Jung's division of extraversion and intraversion and several other theories and an analysis of heredobiologic development of personality. In the discussion of antinomy he uses as examples well known historic individuals whose contrast of behavior indicates the existence of opposite qualities. Following the same clue, Von Verschluer discusses intellectual development and inheritance, the inheritance of healthy and unhealthy tendencies as mental weakness, schizophrenia, criminality, musical ability and genius. Buseman speaks of psychic development and environment. He points out that while one's surroundings and advantages may be favorable the "anlagen" may favor the development of unhealthy tendencies or vice versa. Dipdolla and Schlemmer make a plea for the careful instruction of the growing child, the teaching of the problems of heredity to the upper grade child and the proper direction of the child in the study of political history, literature and philosophy. Inheritance exerts its influence through the "anlagen" which cannot be changed. All the contributors express the idea that a study of the problems of heredity and environment indicate the existence of certain definite tendencies. An examination of the family tree of a noted composer, of a philosopher or of an individual with cleft palate will reveal the presence of definite "anlagen." What, however, the individual will amount to depends on his capabilities foreshadowed in the "anlagen" and by proper direction. The denial of the inheritance of acquired characteristics, it seems, may be refuted. This book can be well recommended to students of the subject.

A TEXTBOOK OF LABORATORY DIAGNOSIS WITH CLINICAL APPLICATIONS FOR PRACTITIONERS AND STUDENTS. By Edwin E. Osgood, M.A., M.D., Assistant Professor of Medicine and Biochemistry, University of Oregon School of Medicine, and Howard D. Haskins, M.D., Professor of Biochemistry, University of Oregon School of Medicine. Cloth. Price, $5. Pp. 475, with 27 illustrations. Philadelphia: P. Blakiston's Son & Company, Inc., 1931.

This new work is intended primarily for clinical application. The authors have not attempted to present the exhaustive array of laboratory tests and data that are usually found in books on this subject. Only those methods have been selected which have given the most reliable results under all conditions and which are satisfactory for clinical application. Where indications for detailed laboratory procedures exist the reader is referred to other textbooks on laboratory diagnosis. A carefully chosen bibliography is given at the end of each chapter so that the information given in the text may be extended if a more detailed discussion is desired. The manner of presentation and organization makes it an excellent book for teaching purposes. The subject matter is divided into two major divisions. The first part is essentially clinical in its organization. It deals with the indications and interpretation of laboratory procedures for bedside use. A unique feature in this part of the book is the summary of biochemistry, pathology, anatomy and physiology of the system under consideration. This will be found particularly valuable for the physician. The second part of the book deals with laboratory methods. This consideration is especially designed for the individual performing the test. The methods are given as they should be performed, and the changes which extensive use have shown to be of value are indicated. An added and distinctly helpful feature of the book is a special index of laboratory methods by diseases. In this plan, diseases and syndromes are alphabetically listed in which laboratory procedures are an aid in diagnosis or of interest in the study of the disease. The authors do not intend this as a short cut to thinking but merely as a plan for the efficient and thorough study of disease by laboratory methods. The text is well illustrated with six colored plates, and diagrams and drawings where they are indicated. The physician and the medical student will find this an instructive and comprehensive presentation of the subject. It has been written with the expressed purpose of facilitating his understanding facts which are commonly considered apart from clinical medicine.

THE PHI RHO SIGMA FRATERNITY AND THE UNIVERSITY OF MICHIGAN. Compiled by Jonathan Forman, B.A., M.D., and Samuel Wright Donaldson, A.B., M.D. Cloth. Pp. 187, with illustrations. Columbus, Ohio: The Journal of Phi Rho Sigma, 1930.

The peculiar interest in this book, of course, is to the members of the fraternity from the University of Michigan. Contained in its pages, however, is of much value in an historical way, especially as regards the development of the medical school at the University of Michigan. To one who is interested in fraternity work the details of the development of this medical fraternity and what it has stood for would be of interest. The book is well gotten up for one of its kind.

ANATOMY IN THE LIVING MODEL: A HANDBOOK FOR THE STUDY OF THE SURFACE, MOVEMENTS AND MECHANICS OF THE HUMAN BODY AND FOR THE SURFACE PROJECTION OF THE VISCERA, ETC. By David Waterston, M.A., M.D., F.R.C.S.E., Bute Professor of Anatomy in the University of St. Andrews. Cloth. Price, 25/. Pp. 255, with 90 illustrations. London: Hodder & Stoughton, Ltd., 1931.

The author is well and favorably known in the United States on account of his previous publication, the Edinburgh Stereoscopic Anatomy. That work has proved itself reliable, practical and instructive, and in these respects Professor Waterston's new book fully sustains his reputation. The book is not a compilation of ordinary surface landmarks but rather a treatise dealing with the surface of the living body, with the study of parts in action, and it includes a consideration of the structural basis on which such activities depend. Obviously, in such a treatise much attention must be devoted to the skin and its functions, and in the first twenty-five pages devoted to this subject the reader will find much interesting information and stimulating thought; this is particularly true of his account of its physical properties —its resistance to the passage of electricity, of heat or of watery fluid. He shows that the epidermis is not a firm, rigid, horny layer but that in the living subject it forms an exceedingly plastic surface, and his discussion of the structures serving the sense of touch in its various forms shows convincingly that it will be necessary to question many of the old ideas commonly stated in the textbooks concerning touch and pressure corpuscles, and the heat, cold and pain areas on the surface of the body. The projection of internal structures on the surface is treated by means of a series of sixteen plates which represent drawings made to scale from consecutive stages of the dissection of one subject. In these drawings the deeper structures are made to appear on the surface by a method of orthogonal projection. This series of plates is a real addition to anatomic illustration and will prove of great value to students and to physicians. The appendix is devoted to some suggestions and instructions for practical work on the living model, which will be welcomed by instructors in the medical schools. The publishers have produced a serviceable and timely book which constitutes a valuable contribution to the study of the anatomy of the living, the real objective of all study of human anatomy. It can be strongly recommended to the attention of students and physicians.

TEXTBOOK OF HUMAN EMBRYOLOGY. By Cleveland Sylvester Simkins, Ph.D., Associate Professor of Anatomy, University of Tennessee Medical School. Cloth. Price, $4.50. Pp. 469, with 263 illustrations. Philadelphia: F. A. Davis Company, 1931.

This is smaller than most of the popular textbooks on the subject. Comparative embryology is omitted, and the book aims at giving a straightforward account of human embryology. Instead of chapters on blastulas and gastrulas, the cyclic phenomena recurring in the reproductive organs of the human

female are presented. In general an attempt is made to associate the development of structures with their evolutionary history and function and there is included an account of the more common variations that find an explanation in embryology. A summary at the end of the discussion of each topic adds to the value of the book to students. Among the illustrations are nine full page colored plates. While many appear for the first time in this book, a considerable number have been reproduced from the *American Journal of Anatomy* and from the Contributions to Embryology of the Carnegie Institute of Washington. The proofreader has neglected to correct some of the mistakes in Latin terminations. The book should be instructive for students taking a course in human embryology.

EL VOLUMEN CIRCULATORIO POR MINUTO EN EL ESTADO NORMAL Y PATOLÓGICO. Por Dr. Isaac Berconsky, jefe de trabajos prácticos de la Facultad Médico del Hospital T. Alvear. Paper. Pp. 210, with illustrations. Buenos Aires: "La semana médica" Imp. de E. Spinelli, 1930.

The author has used a combination of the methods of Meakins and Davies, Field, Bock, Gildea and Lathrop to determine the minute-volume output of blood in man. Figures for the cardiac output in healthy individuals are given. Patients with decompensated cardiac disease, compensated mitral stenotic lesions or bronchial asthma have a diminished cardiac output; with aortic regurgitation, exophthalmic goiter and toxic adenomas of the thyroid gland, the output is greater than normal.

WARREN'S HANDBOOK OF ANATOMY FROM ORIGINAL DISSECTIONS. By John Warren, M.D. Text by Robert M. Green, M.D., Assistant Professor of Applied Anatomy, Harvard Medical School. Cloth. Price, $12.50. Pp. 384, with 324 illustrations. Cambridge: Harvard University Press, 1930.

This is a topographic atlas of human anatomy. The late Prof. John Warren had made during many years a series of dissections and other preparations to illustrate his lectures on the subject and to facilitate the study of gross anatomy. He died before the work was done. Other members of the department at Harvard made additional preparations, and drawings were made by Mr. H. F. Aitken, instructor of drawing. The text covering the bones and joints had been written at least in part by Dr. Warren. It was completed and the book was edited by Dr. Green. The preparations illustrated were selected from more than 400 made for the work. They are significant and valuable. They have been planned and made with good judgment and great care. They include dissections at successively deeper levels of all parts of the body and many special dissections of particular regions. The drawings, all in black and white, are large, comprehensive, clear and well labeled. The text is not intended to be an exhaustive treatise. It is arranged on a regional basis and covers the field of a good course in dissection.

STUDIEN ZUR PSYCHOLOGIE UND SYMPTOMATOLOGIE DER PROGRESSIVEN PARALYSE. Von Prof. Dr. med. et phil. Paul Schilder, dz. Research Professor für Psychiatrie, New York University. Paper. Price, 15 marks. Pp. 176. Berlin: S. Karger, 1930.

This monograph is concerned with the intimate psychology of the patient with dementia paralytica. It is of extreme interest to the psychoanalyst but does not touch on the properties of the diseases which concern either the general practitioner or the neurologist.

INTESTINAL TOXEMIA (AUTOINTOXICATION) BIOLOGICALLY CONSIDERED. By Anthony Bassler, M.D., F.A.C.P., Consulting Gastro-Enterologist, St. Vincent's Peoples' and Jewish Memorial Hospitals, New York City. Cloth. Price, $6. Pp. 433, with 16 illustrations. Philadelphia: F. A. Davis Company, 1930.

In this book the theories of auto-intoxication and of focal infection are combined in an attempt to substantiate the thesis that the intestinal tract is the most important focus of infection in the human body; that, indeed, the bacteria in other recognized foci of infection are generally derived from the alimentary tract. Thus the author traces to the bowel the origin of nearly all diseases to which mankind is heir. A diagnosis, according to Bassler, can seldom be accomplished in less than four to six months of continuous cultural and laboratory study, with the employment of more than 200 tubes of culture medium for a single stool specimen, and the examination of many warm and cold specimens of stools while the patient is kept on various types of standard diets. There are no short cuts in his procedure, and any attempt at such will invariably result in the isolation of the wrong organism. In no two individuals are the same organisms responsible for the conditions. Bassler's treatment consists of the administration of vaccines subcutaneously or rectally, serums, diet, and attempts at breaking up symbiotic groups by antagonistic bacteria administered rectally or subcutaneously. Of the various procedures mentioned, he considers diet the least important. When a therapeutic result is not obtained, the trouble, Bassler believes, lies in the isolation of the wrong bacteria. The whole is a dizzy pyramiding of unproved treatments on unproved theories; and, when the monstrous structure collapses, the failure is charged to accident and improper technic, not to the unsoundness of the underlying principles. The book might take a prize for the number of probably erroneous dogmatic statements, the number of unanswered questions raised, and for general verbosity.

GUIDE TO STUDY OF HISTOLOGY AND MICROSCOPIC ANATOMY FOR THE USE OF STUDENTS IN MEDICAL SCHOOLS AND COLLEGES. By Avery E. Lambert, Ph.D., Professor of Histology, School of Medicine, State University of Iowa. Cloth. Price, $3. Pp. 262, with 152 illustrations. Philadelphia: P. Blakiston's Son & Co., Inc., 1930.

This is a brief laboratory manual intended to be used in a course in histology and microscopic anatomy that is limited in time. It contains a brief account of the microscope with directions for its use, a statement of the equipment to be provided by the student, brief laboratory directions, and a brief but clear account of the tissues studied. Forty-seven of the illustrations have been drawn from laboratory preparations; the others are mainly from Lewis and Stohr's "Textbook of Histology." Students who wish to have a thorough and detailed knowledge of microscopic anatomy, in view of its fundamental importance, would supplement this introductory study by using the larger textbooks available in the field.

Medicolegal

Trauma and Gastric Ulcer

(Langeberg v. Interstate Business Men's Acc. Ass'n. (S. Dak.), 231 N. W. 930)

The plaintiff, a carpenter, was insured against "loss of life, limb, sight or time, by reason of physical injury effected by accidental means, independent of all other causes." While boring holes in the edge of a door with a brace and bit, to make a slot for the insertion of a mortise lock, he encountered a knot in the wood. He forced his weight heavily against the head of the brace. His foot slipped, the door swung loose, and he fell to the floor. When he fell, the head of the brace was driven heavily against the upper part of his abdomen. He felt a sharp pain in the region of the stomach and vomited blood. At intervals during the afternoon and evening he vomited large quantities of blood. An effort was made to remove him to his home, but he was so ill that on the way he was placed in a hospital in an intervening town, where he remained for five days before the journey was completed. After about three weeks' treatment, an operation was performed. It was found that the bleeding came from an area of the stomach in which there was an ulcer. The plaintiff had experienced no pain nor symptom of ailment prior to the accident. In a suit on his insurance policy, the plaintiff recovered a judgment, and from an order denying a new trial the insurer appealed to the Supreme Court of South Dakota, where the judgment of the court below was affirmed.

A surgical expert witness who testified for the insurer said that "the sole cause of the hemorrhage (from which the plaintiff suffered) was the existence of the ulcer in the upper part of the stomach which caused an erosion of the blood vessels in consequence of which they broke and that the pressure against his stomach by falling against the rose (head) of the brace did not affect the ulcer." In the language of finality, he testified that the blow received by falling on the brace and bit could have no effect whatever on the ulcer nor could it have caused the hemorrhage; hemorrhages resulting from an ulcer

in the stomach always occur without exercise or without a blow or pressure from the exterior; they are the result of erosion of blood vessels by disease; the application of external violence would not cause a rupture of either healthy or diseased vessels in the stomach. He was unable to think, he testified, "of another cause of a rupture of blood vessels and a hemorrhage of the stomach aside from ulcers."

Another medical witness for the insurer was the physician who attended the plaintiff from the time he reached his home after the accident until after the operation and who performed the operation. He testified that the force of the blow when the plaintiff slipped and fell on the head of the brace "undoubtedly caused the rupture that was the immediate and direct cause of the hemorrhage," saying further:

"In my opinion the slipping and the blow on the abdomen from the brace and bit alone would not have caused the hemorrhage if the ulcer had not been present. The injury to the ulcerated surface produced a hemorrhage as a result of the blow or injury. The blow was the immediate cause of the rupture and hemorrhage, the blow against the ulcerated surface."

A medical witness for the plaintiff, who qualified as an expert, said, in response to a hypothetic question, that in his opinion the plaintiff had received an injury to the lining of his stomach sufficient to produce hemorrhage; ulcers are usually classified as acute and chronic, and an acute ulcer of the stomach may be caused by either internal or external injury; acute ulcers come on rapidly and most of them get well without operation. There are many stomach hemorrhages, he said, that occur without an ulcer, and he believed that this was true particularly under the circumstances under which this injury occurred. He testified further that, assuming that the plaintiff had a chronic ulcer of the stomach when the injury occurred, a pressure or blow resulting from falling against the brace and bit disturbed the ulcer and caused it to bleed. An injury sufficient "to dent the surface of the stomach or ulcer," he said, "would produce the bleeding."

The two experts who testified for the defendant, having flatly contradicted each other as to the possibility of the blow having been the direct cause of the hemorrhage, and the expert testifying for the plaintiff having corroborated the opinion that the hemorrhage was the direct result of the blow received by falling on the head of the brace, the trial court, said the Supreme Court, properly left it to the jury to say whether or not the injury was effected by accidental means independent of all other causes.

It is to be kept in mind, said the Supreme Court, that this is an action to recover, not for death, but for loss of time resulting from the accident. Even if a gastric ulcer existed, it had caused the plaintiff no inconvenience up to the time of the accident; he had no reason even to suspect that it existed. But for the accident, he might have gone on working as before, unaware of the ulcer, and might have died from some natural cause entirely dissociated from the ulcer. Had it not been for the accident, he might have lived out his natural life and lost no time whatever from work. With that possibility in mind, may it not be said that the accident was the sole cause of the loss of time resulting from the injury?

Malpractice: Infection Following Extraction of a Tooth.—Suit was brought against a licensed dentist, based on an infection following the extraction of a tooth, attributed to the dentist's negligence. The trial court instructed the jury that if it should find that the dentist used or employed either a hypodermic needle or a solution that was not sterile in injecting the anesthetic into the patient's gum, and thereby proximately caused the infection, the patient was entitled to recover damages. Judgment was rendered in favor of the patient. On appeal, however, the district court of appeal, third district, California, held that this instruction was erroneous, and reversed the judgment of the trial court, because the instruction did not inform the jury that the liability of the dentist depended on proof that he had *negligently* used an unsterile needle or solution (*Barham* v. *Widing (Calif.)*, 288 P. 716; 96 THE JOURNAL, May 23, 1931, p. 1826). On appeal to the Supreme Court of California, however, the judgment of the district court of appeal was set aside and the judgment of the trial court was affirmed. It is inconceivable, said the Supreme Court, that any jury could have been misled because the instruction did not specifically refer to the negligence of the dentist. Both before and after the instruction was given the jury, time and again, received a clear and correct exposition of the law applicable to the case. It was specifically instructed that "plaintiffs can recover, if at all, only upon proof of negligence or carelessness," and that it must appear from the evidence that the injuries alleged "were occasioned by the carelessness or negligence on the part of the defendant as charged in the complaint." Furthermore, under the evidence it was apparent that, as observance of the ordinary standards of practice would preclude the use of an unsterile needle or solution, such use could be due only to carelessness or negligence.—*Barham v. Widing (Calif.), 291 P. 173, superseding Barham v. Widing (Calif.), 288 P. 716.*

Privileged Communications: Waiver May Be Withdrawn.—The plaintiff, the beneficiary under a life insurance policy, in filing his claim and the proof of the death of the insured, signed the following certificate, constituting a part of the blank form for claims:

"I hereby waive, on behalf of myself or of any person who shall be interested in the policies hereinbefore mentioned, all provisions of law forbidding or restricting any physician or other person who, at any time, attended or examined the deceased from disclosing in the courts or otherwise, any knowledge, information or belief which he thereby required (sic); and I hereby specifically authorize all such persons to freely communicate their knowledge to the company, if it requires them to do so."

This instrument was only a written promise to waive the privilege. Assuming that the plaintiff, as beneficiary under the policy, might legally waive the privilege of confidentiality granted the deceased, this instrument was ineffective to accomplish that purpose irrevocably. The defendant insurance company in no wise changed or altered its position by reason thereof. The waiver was no part of the terms or conditions on which the policy was issued. The plaintiff therefore had the right to withdraw the same at any time before it was acted on.—*National Life and Accident Insurance Company v. Bell (Okla.), 291 p. 106.*

Society Proceedings

COMING MEETINGS

American Association for Thoracic Surgery, San Francisco, July 1-3. Dr. Duff S. Allen, Washington University Medical School, St. Louis, Secretary.

American Surgical Association, San Francisco, June 29-July 1. Dr. Lincoln Davis, 205 Beacon Street, Boston, Secretary.

Maine Medical Association, Greenville, June 25-27. Dr. Philip Webb Davis, 22 Arsenal Street, Portland, Secretary.

Montana, Medical Association of, Bozeman, July 8-9. Dr. E. G. Balsam, 208 North Broadway, Billings, Secretary.

Pacific Northwest Medical Association, Seattle, June 25-27. Dr. Frederick Epplen, Stimson Building, Seattle, Secretary.

Washington State Medical Association, Aberdeen, August 3-5. Dr. Curtis H. Thomson, 1305 Fourth Avenue, Seattle, Secretary.

Wyoming State Medical Society, Rawlins, July 13-14. Dr. Earl Whedon, 50 North Main Street, Sheridan, Secretary.

AMERICAN SOCIETY FOR THE STUDY OF DISORDERS OF SPEECH

Fifth Annual Session, held at the Stevens Hotel, Chicago, Dec. 30 and 31, 1930, and Jan. 1, 1931

The President, DR. ELMER L. KENYON, Chicago, in the Chair

STUTTERING (STAMMERING)

The Relationship of Personality and Behavior Difficulties to Disorders of Speech

DR. PAUL L. SCHROEDER and LUTON AKERSON, Chicago: The relation of stammering to about a hundred personality and conduct traits was investigated with a view toward ascertaining the type of behavior difficulties that were found to be associated in some degree with stuttering (stammering). The study covered 2,113 white boys aged from 6 to 17 years who are now, or have been, pupils in a regular school system.

While these statistical calculations indicated the type of psychoneurotic, unaggressive behavior associated generally with

the fact of stammering, they do not of themselves show which is primary and which is secondary. It may be that stammering is a symptom of this type of personality defect, or it may be that this type of personality is the result of the child's reaction toward his stammering. Or it is possible that the fact of stammering and the personality of the stammerer are both symptoms or concomitants of some deeper-lying causal complexes, which will require more intensive research to isolate and identify.

The general conclusion from this survey of about a hundred personality and conduct traits is that stammering appears to be characteristic of the shy, sensitive, inadequate and neurotic sort of child rather than of the child with aggressive conduct traits.

Among the 5,000 children with behavior difficulties referred to the clinic, stammering was found present in about 4 per cent of the boys and in about 2 per cent of the girls. There is no observable correlation between the intelligence quotient as obtained on the Stanford-Binet scale and stammering and stuttering. Speech defects other than stammering are more frequent among lower intelligence levels.

Stammering as an Impediment of Thought

DR. C. S. BLUEMEL, Denver: This article was published in full in THE JOURNAL, May 30, page 1846.

The Phenomenology of Stuttering

ROBERT WEST, PH.D., Madison, Wis.: In 10,268 stutterers found in a partial survey of American city school children, the following facts as to incidence appear:

The incidence of stuttering increases during just those years when the articulatory disorders are on the decrease, suggesting that stuttering is associated with etiologic factors different from those producing disorders of articulation as such.

The stutterers, as a class, show no appreciable difference in the intelligence quotient from the nonstutterer, if the normal range is assumed to lie between 90 and 110.

The ratio between the number of male and female stutterers is not a constant one, but the males always outnumber the females. The ratio is about 3.1 to 1 in the sixth year and increases as the age group approaches puberty, then for two years falls to 3.7 to 1, and then immediately rises to the highest point in the series, 5.5 to 1.

Probably twice as many children begin to stutter during their school careers as do before they go to school.

The increase in stuttering in the lower grades is due to the increase in the number of male stutterers rather than to that of the female stutterers. Many more boys begin to stutter during five years of their schooling than begin before their school life; and the increase in the total number of stuttering boys and girls is due to the increase in the number of boys with little increase in the number of girls.

Neuropedagogic Process of Treating Stutterers at Ohio State University

G. OSCAR RUSSELL, PH.D., Columbus, Ohio: All stutterers and stammerers encounter certain conditions in which they are not troubled:

1. No stammerer or stutterer is troubled when he sings (especially in concert) common songs whose melody and words he knows well.

2. None are troubled when they whistle.

3. Some of them soliloquize and some read with but slight difficulty when subjectively sure they are all alone (and certain other conditions are absent).

4. Speech broken up into syllables, each articulated along with an accompanying voluntary muscular movement of almost any kind, whether of the arm, foot, breathing or other similar muscles controlled from non-speech areas of the brain, can be trained to function in all stutterers and stammerers without the usual blocking impediment, at least so long as the voluntary control is kept.

5. Unblocked speech may be trained to accompany, "be superimposed on" or "be led by" many types of visual, auditory or kinesthetic images, so long as voluntary attention can be concentrated on the latter.

Both 4 and 5 are sometimes grouped under the one term "principle of distraction." While no compilation of evidence has been made by those who base their methods of treatment on some aspect of one of these facts, their testimony would seem to indicate that, under careful training, voluntary attention on the "control" may in the end be relinquished under some of these processes.

Dunlop's Theory of the Treatment of Stuttering

JOHN M. FLETCHER, PH.D., New Orleans: A serious error is made when stuttering is diagnosed as a mere physiologic incoordination induced by wrong habits of speech, and a corresponding error when on that diagnosis phonetic drill methods are based for the treatment of the stutterer.

Experimental data show that the phenomenon of stuttering may be made to come and go at will by even a slight manipulation of the social relations between the patient and his auditor without asking the patient to repeat the performance of stuttering.

There is an almost endless number of ways in which the social situation may be altered for the stutterer, and a correspondingly great number of resultant patterns of social attitudes produced in his mind. In many instances the fact that the social setting has been changed may escape notice, so that the effects that have been secured become assigned to other than their real causes. This accounts for much of the deceptive success of many persons and institutions engaged in the treatment of stuttering, and at the same time explains the lack of permanence of the "cures."

This fact has been responsible for the long delay in the working out of a dependable program of treatment for this age-old malady and for the numerous misleading and futile programs of treatment that spring up from year to year even at this late day.

Why Visualization Is the Best Method for Stammering

DR. WALTER B. SWIFT, Boston: The proper treatment of the stutterer is training in visualization, because it is the faculty of vivid visual imagery during speaking that constitutes the essential difference between the normal speaker and the stutterer. Certain cases at the Boston Psychopathic Hospital were analyzed as to their reactions during stuttering. A definite deficiency in visual imagery was found. The normal visual process that accompanies speech was temporarily or permanently diminished. In some cases a deficiency was present only while the stammering was going on. By "visual lack" is meant that the mental picture of the object for which the word stands is slightly or temporarily diminished or lacking altogether. Stutterers improve rapidly under training calculated to offset this visual lack.

Conscious Detailed Psychomuscular Control of Speech Production as an Effective (If Not Necessary) Basis for All Manner of Psychologic Treatment of Stammering

DR. ELMER L. KENYON, Chicago: The modern conception of treatment of stammering goes back to G. Hudson Makuen and Herman Gutzmann, but especially to Makuen. Dr. Makuen's stammerers were taught conscious active chest control, coupled with consciously directed production of each elemental sound of speech. Accompanying this training in conscious control of the speech mechanism, Dr. Makuen carried on a definite psychologic teaching that constituted an important and intelligent forerunner of present-day conception.

The changing of the psychologic control that insures certain understanding of how to produce speech consciously and normally requires much detailed education and training. As far as possible, vagueness of understanding of physiology and method is eliminated. Modern psychophysiology is essential. Through the employment of models, drawings and description, the stammerer is first caused to understand his speech mechanism and its manner of action. He is taught to conceive of it as a machine of talking, the action of which he is gradually to learn to control consciously. Principles as to psychologic management of the mechanisms are gradually developed. Since control of the mechanism varies with each individual sound, each must be taken up in detail, from the standpoint of understanding and controlling the production of that particular sound.

Combinations in great number are carefully practiced. Thus is gradually built up an entirely new and thoroughly intelligent attitude toward speech production. Involved in this new conception are inculcated ideas of calmness, slowness and self-reliance.

How G. Hudson Makuen Treated Stammering

MARY SUMMERS STEEL, Philadelphia: Dr. G. Hudson Makuen was one of the pioneers in the field of speech disorders. In 1897 he was elected professor of defects of speech in the Polyclinic Hospital and College for Graduates in Medicine of the University of Pennsylvania. The following were some of his teachings about stammering:

When the stammering habit is once formed, the only salvation for its unfortunate victim is to go back to the very beginning. His speech is wholly wrong. It is wrong in conception as well as execution. There is no normal tree trunk on which to graft good branches. He must therefore develop a new kind of speech, and to do this it is necessary to establish a new foundation and develop an entirely new superstructure.

The stammerer's speech is wrong in conception because, as is shown by his spasmodic muscular contractions and facial contortions, he tries to do with the articulatory mechanism what should be done with the vocal and respiratory mechanisms. In other words, his thought is wrongly focused and his neuromuscular impulses are wrongly directed. The primary neuromuscular impulse of the stammerer takes place in the articulatory mechanism (the lips, the tongue and the lower jaw), whereas it should take place in the larger respiratory muscles below.

The stammerer should be taught to use only the purely movable portions of his respiratory mechanism in the control of the column of breath, which, by its manipulation and vibration, must be made to produce voice.

Stuttering—What About It?

DR. JAMES SONNETT GREENE, New York: From all indications, stuttering is primarily psychologic rather than biologic. The stutterer cannot directly inherit stuttering speech but inherits his neuropathic constitution, and, living in tense surroundings, almost anything is liable to start his stuttering. Case histories show nervous traits in the patient, in the parents and in other members of the family. It would seem that the environment must have a certain amount of heredity to work on in the first place. Perhaps an 80 per cent environment built on a 20 per cent heredity would be about the right proportion for the stutterer.

The cure, therefore, is a general reconstruction, growth speech reeducation, all given directly or indirectly as needed, resulting in a robust, straightforward development. Just how the approach is made, makes little difference as long as it helps the stutterer's growth, for on his growth depends his cure. More has been done within the last decade to clarify and advance the subject than all that has gone before. The stutterer is getting his long delayed recognition.

Oral Stammering

DR. CHARLES G. STIVERS, Los Angeles: Speech, which is an oral manifestation of the desire for social intercourse, develops from crying, slowly in a normal child and painfully and jerkily in the neurotic, hypersensitive child, by whom every social situation, owing to his memory of repeated failures, is met with fear of the contact. Fear grows into a sense of inferiority and shyness. The resultant hesitation and escape develop a vacillation of the social instrument of expression, which is speech, whether gestured, written or oral, and this vacillation may manifest itself in oral stammering.

When the neurotic child starts school he is under a greater strain than ever and many cases of stammering develop at that time, especially if the beginner is just recovering from some acute illness. It is the duty of the teacher of the primary grades to detect such cases and to ask for the parents' cooperation in their treatment.

A complete medical examination, going fully and carefully into the family history, should be the first procedure. The analysis and exposure of the reasons for the stammering should follow. In this the parents of young children should cooperate, but with adolescents and adults the analysis should be of the patient alone. This analysis is necessary in order to deal interruptedly with the sexual, nutritional, egoistic, in fact, with every form of expression, and to bring about a real catharsis. Disclosure of the difficult sounds or words is also necessary in order to link them with any complex or suppression that may be discovered.

Stuttering

DR. SMILEY BLANTON, Poughkeepsie, N. Y.: Psychoanalysis has made a valuable contribution to the cause and treatment of stuttering. The first stage of the love life of the child is the oral erotic stage in which the child uses the mouth not only to get nourishment but also to get sexual pleasure of the infantile type. The mouth region is highly charged with emotion, and sounds are made partly because of the pleasure they give through the stimulation of the vocal organs. This oral erotic stage passes normally. Sometimes, however, the child remains fixed in this stage; his love energy is centered on himself and he becomes narcissistic. It is this narcissism which gives rise to timidity and self-consciousness.

Stuttering is a difficult combination of organic and constitutional and functional factors that requires speech training, such as may be used for the training of the speech and voice of nonstutterers, that requires a definite knowledge of mental hygiene in order to resolve hampering emotional fixations. These emotional problems cannot be adequately treated by good will and a kind heart and inspirational talks. An adequate treatment of stuttering must combine in a unified whole physical hygiene, mental hygiene and speech training in a unified and well rounded manner.

The Nature and Analytic Treatment of Stammering

DR. ISADOR H. CORIAT, Boston: Stammering is not a speech defect but a psychoneurosis. Any rational treatment of a narcissistic disorder must take into consideration several factors. The speech defect has a meaning—the oral libido is fixed on this symptom and the object of psychoanalysis is to overcome this fixation of the pleasurable oral libido on the speech apparatus. Owing to the character traits of the stammerer and his resistances, this analytic procedure encounters great difficulties. In stammering, as in all the narcissistic neuroses, a vulnerable point must be found in the narcissistic shell of the personality and this vulnerable point in stammerers is the oral libido. The speech training of stammerers reinforces the oral erotic pleasure instead of minimizing or reliving it; it actually gratifies the oral discharge of speech. Speech training does not treat the neurosis as a whole but only the isolated symptom and as such is inadequate and unscientific. The analytic treatment of stammering is directed primarily against the resistances and should penetrate deeply enough so that the patient can revive and reenact the earliest oral experiences. Furthermore, the so-called habit of stammering, analytically speaking, is a form of compulsive-repetition whose object it is to retain the original infantile pleasure of nursing. For this reason, phonetic exercises are diametrically opposed to the analysis and should not be combined with it. The analytic treatment of stammering should be undertaken only by those who have had a long and varied experience with psychoanalysis in both its theoretical and its practical aspects and should be carried out in what may be termed a pure culture, without any admixture of phonetic training.

Some Interpretations of Recent Researches in the Correction of Stammering

ELIZABETH A. MCDOWELL, PH.D., New York: The results of experiments with programs for improvement have shown that students improve most by applying the following technics:

1. The recognition of the habit to be acquired by the person who must acquire it.

2. Exercises and activities for setting up "connections." Among the most useful have been reproductions of the records of the speaker's voice and the noting of the symptoms that are desired and those that are not.

3. A more or less hit-or-miss scheme for experimenting on the part of the patient with exercises and schemes for acquiring the desired speech reaction. These must be very simple at first.

One exercise that is universally successful, is the speaking of isolated syllables in unison with the instructor, who is employing an easy, well modulated voice.

4. Repeating the reactions that have been proved successful in various situations and attaching rewards and satisfactions to each successful effort.

5. Association of the desired reaction with situations in which it must be used.

6. Directing of effort and treatment toward the increasing span of the period between relapses into stammering and decreasing the length of the duration of relapse when it has occurred.

Diagnosis and Treatment of Stuttering

LEE EDWARD TRAVIS, Iowa City: Studies have shown that approximately one half of the stutterers are essentially ambidextrous in unimanual activities. A great deal of this is undoubtedly the result of attempts on the part of parents and teachers to make naturally left-handed children right-handed. Some of it is the continuation of a condition of ambidexterity that existed from the beginning. The task of the speech pathologist is to develop in the stutterer strict one-sidedness, in all motor leads. The side to be selected and made the leading one is determined in the diagnosis of the case. Family and personal histories of handedness and stuttering, physical, psychologic and speech examinations are used for diagnostic purposes. After the side that is to be made the lead one has been decided on, every effort should be made to accomplish the desired end. Typewriting and piano playing should be discouraged. One patient reported a consistent relationship between the amount of daily practice on the piano and the severity of his stuttering. The more he practiced the worse his speech became, and the less he practiced the better his speech became.

Play and games should be introduced into the routine. They should be games that will tend to develop strength and skill in the left arm and hand, or the right, as the case may be. Punching a striking bag, throwing a ball, playing tennis, playing jackstones, ping-pong, handball, horseshoes, and any number of other games will help to develop left-handedness or right-handedness where this is desired. Moreover, they will change an otherwise monotonous routine into a truly delightful program. If competitive games are used, scores should be kept from day to day; tournaments may be held. These things are stressed here because motivation and interest can never be overemphasized.

ASSOCIATION OF AMERICAN PHYSICIANS

Forty-Sixth Annual Meeting, held at Atlantic City, N. J., May 5 and 6, 1931

(Concluded from page 2064)

The Study of Yellow Fever by the Protection Test in Mice

DR. F. F. RUSSELL, New York: Yellow fever will always exist in certain regions in sporadic outbreaks, but there are occasional epidemics. In certain parts of Brazil and in districts of Africa, just north of the equator, it is always to be found. It is impossible to stamp out yellow fever over these large areas, which keep the disease alive and pass out the virus in epidemic waves. Considerable work in these endemic areas has been done, especially since the discovery that the *Macacus rhesus* monkey is susceptible to the disease. A strain has been isolated with which mice have been injected intracerebrally, and by repeated transfer in mice a virus has been developed with virulence for the animals. The serum can be used for protection tests. In towns where there have been no epidemics and no sporadic cases for some time, from 50 to 60 per cent of the children possess immune serum. The disease has occurred without rising to the clinical level and has not been recognized. In Cuba, owing to the work done in Havana, the disease has died out, so that there is hope of killing out the disease by stamping it out in points where epidemics occur. Steamships do not carry the disease, because the period of incubation, six days, is too short for steamship voyages; but with the introduction of airplane travel the disease may again be carried within the six day incubation period.

Central Nervous System Manifestations of Lymphoblastoma

DR. JAMES E. PAULLIN, Atlanta, Ga.: Four cases exhibiting symptoms referable to the nervous system are reported. Two patients in whom there was definite evidence of pressure on the spinal cord with paraplegia and disturbance of sphincter control were temporarily improved with roentgen therapy. One with pressure on the lumbosacral nerves and possible invasion of the cord through the intervertebral foramina in the lumbar region subsequently developed metastases to the skull and died from marked anemia and hemorrhage. The fourth patient had involvement of the upper dorsal and lower cervical nerves on the right side with possible destruction of the seventh cervical vertebra, subsequently having a marked cerebral crisis ending in death for which no adequate explanation was found. It is suggested that central nervous system manifestations may be the first to occur before there is any visible or palpable adenopathy to suggest lymphogranulomatosis. Roentgen or radium therapy is of value in alleviating, temporarily at least, symptoms manifested by the central nervous system.

DISCUSSION

DR. THOMAS B. FUTCHER, Baltimore: It is important that this group of cases of Hodgkin's disease, showing neurologic manifestations from pressure effect, has been brought to our attention. Dr. Paullin has mentioned that the first case came under my personal observation in its earlier stages. The patient was a young dental student who came with a diagnosis of syphilis, which was disproved by repeated Wassermann tests. The supraclavicular glands were markedly enlarged. There were striking evidences of mediastinal pressure characterized by dyspnea, turgid face and neck with some fulness, and a pink appearance of the upper part of the chest as low as the third rib owing to dilatation of the skin capillaries. There was a wide area of mediastinal dulness and the roentgenogram showed a broad mediastinal shadow. A left pleural effusion was aspirated. The true diagnosis was revealed by the histologic study of a supraclavicular gland removed under local anesthesia. Following three radium treatments the patient's symptoms and signs practically disappeared and he was able to resume his dental studies at Atlanta. Several months later he again came under observation at the Johns Hopkins Hospital for lumbar pain, as described by Dr. Paullin. The pain yielded promptly to radium treatment. Several months later and a week before his death, he was again seen in consultation at a private hospital in Baltimore. There was marked anemia and severe cutaneous and mucous membrane hemorrhages. The question arose as to whether or not hemorrhagic condition might have resulted from a radium effect on the blood-forming apparatus.

DR. W. G. MACCALLUM, Baltimore: I did an autopsy which may have a bearing on this, at the Sinai Hospital in Baltimore. We removed a gland in a case of typical Hodgkin's disease, in which the patient had areas of softening in the ribs. One day the patient was sitting up in bed and he leaned forward to drink a cup of tea, when he suddenly died. We found that the odontoid process of the axis was completely severed by erosion, and that with this slight effort he had dislocated the vertebral column and practically cut the cord in two.

DISEASES OF THE BLOOD

Monocytic Leukemia

DR. P. W. CLOUGH, Baltimore: Monocytic leukemia has excited more interest and study than the relatively great rarity might warrant, because of the theoretical support its demonstration would bring to favor the independent status of the monocytes. A review of the literature revealed sixteen cases that conform to the criteria of a monocytic leukemia, and one additional case is reported. These cases have resembled clinically acute leukemia of other types and have been characterized by a marked relative and absolute increase in the number of monocytes in the circulation. As in most previously reported cases there were many immature cells present ("monoblasts"). The cells showed the finely reticulated nuclear structure typical of monocytes, a grayish blue cytoplasm, and reddish lilac granules which did not take an oxidase stain. Relatively large numbers of the cells showed phagocytic activity in stained films.

At autopsy there was a widespread leukemic infiltration of the tissues with reticulum cells that exactly resembled the monocytes in the blood. This was particularly marked in the connective tissue around the vessels. There were also changes in the endothelium of the vascular spaces of the spleen which have been regarded by some as evidence of hyperplasia and desquamation of these cells and of their development into monocytes.

In many of the collected cases there has been some associated myelocytic hyperplasia, a finding that has led some hematologists to regard monocytic leukemia as merely a variant of myeloid leukemia. It seems more reasonable to accept monocytic leukemia as a distinct systemic disease, in which, however, there is often some associated disturbance and perverted activity of other parts of the hematopoietic system.

DISCUSSION

DR. G. R. MINOT, Boston: About four of twelve cases showed definite symptoms of acute arthritis after the leukemia developed. Did Dr. Clough's patients or those recorded in the literature show any arthritic manifestations?

DR. P. W. CLOUGH, Baltimore: These patients had nothing remarkable in arthritic manifestations, and I do not think it was noted in any of the reported cases.

Granulopenia, with Especial Reference to Its Classification and the Benign Types

DRS. G. M. PIERSOL and EDWARD STEINFIELD, Philadelphia: A classification of granulopenias is proposed as follows: 1. Primary granulopenia, (*a*) acute—Schultz—and (*b*) chronic or recurrent. 2. Secondary granulopenia due to general and focal infections, chemical causes, irradiation and blood diseases. The occurrence of benign types, particularly those due to focal infections, is exemplified by several case reports. The mechanism of granulopenia was studied experimentally in rabbits, by the inoculation of various bacteria which have been from time to time found in conjunction with this condition. In addition to the usual methods, the effect of altered states of reactivity was considered based on their resemblance to those instances associated with focal infection. Hyperergy and the Schwartzman phenomenon particularly were studied. A drop in leukocytes was produced only by intravenous methods due to the well known peptone shock. The return of the leukocyte count, ushered in by an influx of young forms, is compared to mild types of granulopenia. In severe types there appeared to be an abeyance of granulopoiesis with lack of maturation of the myeloid series. Case histories are cited, with various etiologic causes. A case due to focal infection occurred in a child of 7, with slightly sore throat, who had a lower molar extracted, followed by a swollen jaw. The child was undernourished and toxic. The blood count showed marked leukopenia. After tonsillectomy the temperature went down, the leukocytes came up, and the child improved.

DISCUSSION

DR. EDWARD STEINFIELD, Philadelphia: We used the words "remote resemblance" and the word "sensitivity." It is practically more than remote resemblance, as in the case of the little girl with general infection. We used the term sensitivity because the tonsil extraction gave the area comparable to the intravenous injection in a local area. Despite this theoretical resemblance, we could not produce any definite permanent leukemia.

Roentgen Treatment of Agranulocytosis

DR. ALBERT E. TAUSSIG, St. Louis: The number of cases of agranulocytosis reported in the literature is now sufficiently large to justify a first attempt at a statistical evaluation of the various methods of treatment. Only three methods are of importance: (*a*) intravenous injections of small doses of neoarsphenamine, (*b*) blood transfusions, and (*c*) the irradiation of the long bones with the x-rays. An analysis of 340 cases showed a total mortality of 79 per cent. For the purpose of evaluating therapeutic procedures, cases in patients who died within forty-eight hours of beginning treatment were discarded. This leaves 80 patients treated by means of irradiation of the long bones with a mortality of 53 per cent; 49 patients treated by means of transfusion, with a mortality of 69 per cent; 31 who received neoarsphenamine with a mortality of 77 per cent; while of 172 patients who received other methods of treatment, 75 per cent died. It would appear, then, that only irradiation and transfusion promise even reasonably satisfactory results. It will probably be wise to use both methods in the treatment of a severe case and doubtless the results will be better, the earlier these methods are applied.

During the past twelve months, seven cases of agranulocytosis were seen at the Jewish Hospital of St. Louis. Of these patients, two were moribund when admitted and died the same day; a third received only symptomatic treatment and also died. The remaining four were given stimulating doses of x-rays over the long bones. Of these, two recovered, responding rapidly to the treatment, and were discharged clinically well. The other two also responded promptly and satisfactorily to roentgen treatment, the blood picture becoming normal and the fever and angina subsiding; but after an interval of well being, both patients relapsed, and in this relapse were refractory to the x-rays. Both died in coma.

DISCUSSION

DR. L. M. WARFIELD, Milwaukee: I should like to ask Dr. Taussig where he gives irradiation treatment, whether over the long bones or over the ribs. I have treated some patients over the long bones, and I don't think it has done any good.

DR. ALBERT E. TAUSSIG, St. Louis: An effect on the bone marrow is aimed at. The maximal amount of marrow is obtained in the long bones, with the minimal amount of tissue over them.

Production of Hemoglobin, as Modified by Liver Abnormalities

DR. G. H. WHIPPLE, Rochester, N. Y.: Hemoglobin regeneration in experimental anemia has received much attention during the last few years. The experiments of Robbins and Whipple were concerned with a simple anemia due to withdrawal of blood. This experimental anemia in dogs is maintained at a given level—from 40 to 80 per cent of hemoglobin, or one-third the normal hemoglobin level. New hemoglobin produced above this level is withdrawn and measured, the anemia level thus being kept constant and the potency of any given diet for the production of hemoglobin under these conditions being evaluated. These dogs are kept anemic for years, in some cases seven years, and are in a state of perfect health and activity. The reaction to fixed diets is constant, and repeated experiments in the early or late years of the anemic period will show a similar hemoglobin output.

With this base line control for anemic dogs, interesting differences may be recorded in Eck fistula dogs, one continuously anemic for six years. The Eck fistula dog is below the average normal for hemoglobin production on various standard diet intakes. This is illustrated in a table shown to indicate both the control and Eck fistula production of hemoglobin in anemia. When the Eck fistula dog is poisoned by chloroform it is well known that the liver is injured and that the normal repair of this central necrosis may be greatly delayed. Under certain conditions, therefore, the Eck fistula liver might approach a physiologic insufficiency. Under favorable conditions following chloroform poisoning of an Eck fistula dog it has been observed that the output of hemoglobin on standard diet intake may fall to a level about half that of the Eck fistula before the chloroform poisoning. This condition may last for months but in one case was followed after eight months by a return of liver function to normal and a normal hemoglobin output. This suggests that the liver takes an important part in hemoglobin production. It is suggested that the liver helps in the grouping of amino-acids essential to the formation of parent pigment substances which are utilized by the bone marrow to produce finished red cells. This observation is in harmony with the well known fact that liver feeding enables an animal or a human being to produce large amounts of new blood cells. This helps to supply a logical explanation for the liver diet treatment in anemia.

DISCUSSION

DR. W. S. THAYER, Baltimore: In ordinary chlorosis the blood counts were lower. Chlorosis is now almost a paleonto-

logical disease. The first year I was in Baltimore I followed sixty or seventy cases. There was almost always considerable actual anemia, and the relative percentage of hemoglobin was low. Typical chlorosis responded well to iron. With a blood count as low as 2 million red cells, recovery was quite steady. In regard to hemoglobin, I think, from a study of many cases of chlorosis, that a normal red cell count, with low hemoglobin, is rare. There was always some anemia with it. With a blood count of 2 million red cells, and a hemoglobin of 20 per cent, the response was very definite. I don't think I have seen a normal blood count with low hemoglobin.

DR. DOUGLAS VANDERHOOF, Richmond, Va.: In true chlorosis one thinks of an adolescent female with a spontaneous anemia in which the red cell count may be relatively normal while the hemoglobin is much reduced. A striking differential point is the usual gastric hyperacidity in chlorosis.

Further Observations on Material in Liver, Active in Pernicious Anemia

DRS. W. W. PALMER and RANDOLPH WEST, New York: Barium salts of acids derived from liver, highly active in pernicious anemia, are described, and from these a quinine salt has been isolated. On hydrolysis, beta-hydroxyglutamic acid and hydroxyproline have been identified. More recently Dakin has isolated the quinine salt of a tribasic acid from liver, which contains the pyrrolidone ring and has a higher melting point and quinine content than those of acids previously reported. Injections of 700 mg. of this acid have given in two instances modest reticulocyte rises, up to 15 and 20 per cent, with red blood cells at about one million. A crystalline substance has also been isolated from the regenerated barium salts, which is highly potent clinically.

Anemia of the Mycrocytic Type in Middle-Aged Women

DR. DOUGLAS VANDERHOOF, Richmond, Va.: This report deals with five patients presenting a type of anemia and certain clinical features that suggest a disease entity. The patients were all women, the youngest 37 and the oldest 46 years of age. A similar picture in a male has not come under observation.

The anemia in these women was essentially chronic, having lasted from eleven years to fifteen years in four cases, and at least two years in one case. There had been no remissions and there had been no symptoms or signs suggesting degenerative symptoms in the spinal cord. Four of the women showed the typhoid tongue of atrophic glossitis. Gastric analysis by the fractional method showed achlorhydria in four cases, with no response after the hypodermic injection of 0.5 mg. of histamine in three, while one patient showed a slight secretion of free hydrochloric acid after the histamine. In the fifth patient achlorhydria was strongly suspected, but she refused to have a gastric analysis made. All suffered from weakness, palpitation and breathlessness. Four complained of digestive disturbances. Three listed diarrhea of the morning type as a prominent symptom. These five women all had menstrual irregularities with the history of excessive bleeding at the menstrual periods.

When they first came under observation, the hemoglobin ranged from 40 per cent to 58 per cent in four, with red cell counts from 3,200,000 to 3,900,000. In the fifth patient the hemoglobin was 65 per cent and the red cell count 4,200,000. All showed a low color index. The striking feature of the blood picture, however, was the small size of the red blood cells. The mean diameter of the red cells was under 7 microns in every case, ranging from 6.32 microns as a minimum to 6.96 microns as a maximum. This blood picture may be properly classified as anemia of the microcytic type.

The anemia in these five women is of the hypochromic or chlorotic type, but the total red cell count tends to be lower than in true chlorosis, and the atrophic glossitis and gastric anacidity are distinguishing features in the cases here presented.

Treatment consists of large doses of iron and adequate hydrochloric acid therapy. Instead of the iron, an aqueous liver extract can be used with good results. The anemia gradually recurs when treatment is omitted, so that it must be resumed from time to time, as determined by the blood count. Hysterectomy may be advisable to put a stop to the periodic blood loss, or this effect may be secured by radium or high voltage roentgen therapy when indicated.

Response of the Reticulocytes to Iron, and Some Aspects of Iron Therapy

DRS. GEORGE R. MINOT and C. W. HEATH, Boston: The response of the reticulocytes in pernicious anemia to effective material gives information regarding the potency of the substance administered and the desirable dose for a given case. It aids in determining whether the patient has difficulty in absorbing or utilizing the product when given orally and can thus lead to the advantageous use of a product given intravenously. Because this reaction is of value in pernicious anemia, a study is being made of the response of the reticulocytes to iron in anemias that can be affected by this element.

In pernicious anemia without serious complications, treated with maximal amounts of liver or potent substitutes, the height of the reticulocyte rise is inversely proportional to the level of the red blood cells and hemoglobin before treatment. Similar but less exact relationships exist in anemias responding to iron. Infections and other complications can hinder the action of iron, just as they hinder the effect of potent material in pernicious anemia. Distinct rises of reticulocytes occur in response to iron with relatively high red blood cell levels, at which in pernicious anemia insignificant increases take place. With low hemoglobin values the reticulocytes, in response to adequate treatment, increase much more in pernicious anemia than in secondary anemia. Both the hemoglobin and the red blood cell level must be considered in evaluating the reticulocyte response to iron. For a given red blood cell level the reticulocyte response to maximal doses of iron will be greater, the lower the hemoglobin, and the response for a given hemoglobin level, the lower the red cell count. Although in pernicious anemia the distinctions are not so great, there is a tendency for the reticulocyte response at any given red blood cell level or hemoglobin level to be slightly greater in direct proportion to the color index. The exact type of case should also be considered in evaluating the reticulocyte response to iron. In cases with similar red blood cell and hemoglobin levels there is a tendency for persons with achlorhydria to have reticulocyte responses to iron of less magnitude than those showing free hydrochloric acid in the gastric contents. There is, in general, a direct relationship between the height of the reticulocyte rise and the increase of hemoglobin, at least when, before iron is given, the hemoglobin is less than 6.24 Gm. (40 per cent).

The character of the reticulocyte response to iron is such that the curves yielded from plotting data, for daily reticulocyte counts, tend to have flatter tops and vary somewhat in other ways from those for cases of pernicious anemia treated in a comparable manner with potent material.

DISCUSSION

DR. C. M. JONES, Boston: In twenty gynecologic patients with anemia, with a hemoglobin of 50 per cent, the highest reticulocyte rise was 10 per cent. With a reticulocyte rise of 3 per cent, and hemoglobin rise of 4 per cent and 2,900,000 red blood cells, two patients had diarrhea from iron, and in two iron reduced the hemoglobin. With E 29 they did very well.

DR. G. R. MINOT, Boston: E 29 may contain perhaps material not in alcoholic precipitated extract and thus be of greater value in such cases. In patients with diarrhea, the iron probably did not enter the body. Diarrhea should be avoided by appropriate treatment.

Coagulation of the Blood

DR. AUGUSTUS B. WADSWORTH, F. MALTANER and E. MALTANER, Albany, N. Y.: Relatively pure cephalin, free from lecethin, prepared from beef brain, possesses high coagulative activity, in amounts of 0.002 mg. of cephalin in aqueous solution, reacted with calcium chloride to form a distinct chemical compound and liberate hydrochloric acid. The calcium compound was inactive as a coagulant, but the cephalin recovered from it was again active. A mixture of cephalin with serum protein was precipitated from solution by amounts of hydrochloric acid that were too small to precipitate either protein

or cephalin alone; a small amount of calcium chloride produced the same effect, undoubtedly because of the presence of acid liberated by the reaction between the cephalin and the calcium chloride.

Lecithin, which has no coagulative activity and does not react with calcium chloride, was not precipitated from mixtures with protein under similar conditions. Neither cephalin, lecithin nor mixtures of the two possessed any antigenic activity in the complement fixation reaction with syphilitic serums. The addition of cholesterol had no effect. Lecithin was lytic in large amounts, while cephalin was markedly anticomplementary. Both the lytic and the anticomplementary properties were diminished in the presence of serum. The anticomplementary action of cephalin paralleled closely its coagulative activity.

Race Incidence of Measles, Diphtheria and Scarlet Fever in New York in 1921-1925

DR. HAVEN EMERSON, New York: Five groups of population characterized by a dominance of a particular race were studied within the borough of Manhattan from the point of view of demographic characteristics, environmental factors, and the incidence, death rate and case mortality among children under 5 years of age in these groups, from measles, diphtheria and scarlet fever. These groups, subjected as they are to the same climatic conditions and as nearly uniform opportunities for contact exposure within and without the home as are likely to be found in any urban population, show no correlation between the variations in the incidence and death rates from these diseases, and such factors as density of population per acre, number of persons per family, or proportion of children under 5 to the total population group. Significant differences are found in the death and case incidence rates and in the case mortality percentages for measles, diphtheria and scarlet fever but do not appear to be explained by other factors than those of racial susceptibility and resistance. So far as the statistical method can be used to offer evidence on this point, it seems that the factor of race is the only one of importance that can be recognized clearly as a variant of significance among the population groups studied. The five groups were the children of native born white people of native parents, of Negroes, of Italians, of Russian-Polish, and of Irish.

DISCUSSION

DR. EUGENE L. OPIE, Philadelphia: On the basis of case incidence in relation to death, there are some observations which show striking differences in case incidence. Cummings, during the war, found among 10,000 Negroes from Africa that there were just as many deaths as in the entire British army. There were two cases for every death, while among the white men there were seventeen cases for every death.

Kidney Metabolism

DR. D. D. VAN SLYKE, C. P. RHOADS and A. E. HILLER, New York: Investigations on renal activity have been determined by observations made on deeply anesthetized animals, after tubal evisceration. A technic has been developed to get samples of blood from the renal vein of unnarcotized animals, and to compare this with the arterial blood. We have devised such a technic in dogs. An incision is made at the costal margin, the muscles being split in three layers and the kidney being brought outside the muscle layers. Traction on the pedicle is avoided and the muscles are not closed. Two days after operation the kidney lies in a flap under the skin. Sewing the skin to each side of the renal vein will hold it in position. When the right kidney was removed, a great hypertrophy of the explanted organ was obtained. The animal remained in excellent health for over a year with no evidence of renal dysfunction. By this method we were able to obtain estimations on the oxygen utilization, the urea circulation and the urea excretion. The amount of urea cleared by 2 cc. of urine is equal to that cleared by 75 cc. of blood. This is called the blood urea clearance. In infarcted individuals the amount of blood cleared of urea decreases. It may get down to as low as 4 cc. of blood cleared, or one twentieth of normal in terms of urea clearance. We found that the thing which occurs is increased removal of urea from every liter of blood, and not increase of blood flowing through the kidney. As to oxygen consumption, with 1 cc. removal from the blood, there is an oxygen consumption of 1 cc.; but with ten times the amount of work there is a 4 cc. consumption of oxygen. Thus there is no parallelism between the two activities. Once, for a short time, the kidney excreted no urea, but there was no difference in oxygen consumption. We could not explain this phenomenon but thought that it was due to some reflex. The blood flow through the kidneys was found to be 0.75 liter per minute, or one-fifth that of the body. We found that the kidney works under unusually high oxygen tension as compared with the other organs of the body. This has no influence on the urea excretion and may be influenced by other functions of the kidney.

DISCUSSION

DR. R. T. WOODYATT, Chicago: I am not quite clear as to the charts and what the criteria were as to the amount of urea excretion by the kidneys. Was that based on the difference in the concentrations between the arterial and the venous blood urea? Perhaps that might be inferred from the approximation of the arterial and venous curves. We have done certain experiments with intravenous injections of lactose, and we have obtained uniform concentrations. In dealing with substances in the blood, we have two substances, urea on the one hand, and water on the other. It is possible for the two curves to remain identical even if the water and urea were different.

DR. R. T. WOODYATT, Chicago: I am not sure that the constancy of hemoglobin in the blood means that the water of the blood might not vary. I have seen from 400 to 500 per cent variation in the hemoglobin constituent, which led me to think that, in estimations of rate plus volume flow, in variations permitted to one and the same blood concentration of the lactose, there may be enormous ranges of velocity and excretion.

The Mechanism and Reference of Pain from the Lower Intestinal Tract

DRS. C. M. JONES and F. D. PIERCE, Boston: Visceral pain has been produced in eleven normal subjects at different levels in the gastro-intestinal tract from the jejunum down. This has been accomplished by means of a balloon, which has been passed the entire length of the intestinal tract and has been inflated at different levels. The pain has been characteristic of true referred pain and has been referred out over spinal segments. Pain produced in almost any level in the small bowel has been referred to the midline just above or just below the umbilicus, with occasional reference to the back. In the large bowel, reference has been as follows: from the cecum at McBurney's point with a spread to the epigastrium: in the hepatic flexure, at the upper right quadrant; in the splenic flexures, at the upper left quadrant for the most part. In the ascending, transverse and descending colons the reference for the most part has been lower abdominal, midline, or to the left. In the rectosigmoid, it has been either suprapubic or coccygeal. It would seem in the large bowel as if reference from fixed points was fairly well localized near the point of stimulation. In the more mobile points the tendency was to spread toward the midline well away from the point of stimulation.

Psychalgias: A Study by Means of the Procaine Skin Test of Pains of Psychic Origin

DR. J. H. PRATT, Boston: Three types of pain have been recognized: (*a*) spontaneous, (*b*) produced by motion, and (*c*) produced by pressure on the skin. The last is the most common type seen in hysteria. Brody believed that four fifths of the pains experienced by the higher class of women in England were of hysterical origin. For these pains psychalgia is a better word than neuralgia. Bloch called them topalgias. To test these types of pain, 109 cases were studied. Two of these patients had definite organic disease. In 86 per cent the pain was completely removed by the use of the needle and the employment of suggestion. Twenty-two were relieved for five days, and in one case the relief lasted eighteen months. As to location, 40 per cent of the patients complained of pain in the right lower quadrant, 34 per cent in the arms or legs, 9 per cent in the back, and 22 per cent in the chest.

Current Medical Literature

AMERICAN

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Titles marked with an asterisk (*) are abstracted below.

American J. Obstetrics & Gynecology, St. Louis

21: 455-622 (April) 1931

*Studies on Uterine Hemorrhage; Relation of Hemorrhage to Events of Menstrual Cycle and to Pathologic Findings. C. F. Fluhmann and Dorothy L. Morse, San Francisco.—p. 455.

*Treatment of "Irregular Uterine Hemorrhage" by Female Sex Hormone. M. T. Goldstine and S. J. Fogelson, Chicago.—p. 464.

*Study of Hemoglobin, Cell Volume Per Cent and Red Cell Count, Intra Partum and Post Partum, with Observations on Relation to Morbidity. H. E. Harvey, Lincoln, Neb.—p. 476.

*Induction of Labor by Artificial Rupture of Membranes. A. F. Guttmacher and R. G. Douglas, Baltimore.—p. 485.

*Cervical Cesarean Section: End-Results of 418 Consecutive Operations. L. E. Phaneuf, Boston.—p. 498.

Atelectasis, Asphyxia and Resuscitation in the New-Born. P. N. Coryllos, New York.—p. 512.

Mechanism of Labor from Neurologist's Point of View. B. Crothers, Boston.—p. 526.

*Drinker Respirator Treatment of Immediate Asphyxia of the New-Born: Thirty-Five Cases. D. P. Murphy, R. B. Wilson and J. E. Bowman, Philadelphia.—p. 528.

Treatment of Postnatal Asphyxia. P. J. Flagg, New York.—p. 537.

*Inhalation Method of Resuscitation from Asphyxia of the New-Born. Y. Henderson, New Haven, Conn.—p. 542.

Hemangio-Endothelioma Intravasculare of Ovary: Case. F. W. Sovak and V. Carabba, New York.—p. 544.

Review of Treatment of Cases of Placenta Praevia at Brooklyn Hospital for Past Ten Years. W. F. Nelms, Brooklyn.—p. 550.

Place of Porro Operation in Modern Obstetrics. S. S. Rosenfeld, New York.—p. 556.

Postpartum Care. C. E. Galloway, Evanston, Ill.—p. 558.

Ovarian Cyst Complicating Pregnancy. C. E. Caverly, New York.—p. 566.

Uterine Hemorrhage.—An analysis made by Fluhmann and Morse of 1,137 cases of abnormal uterine bleeding showed that 630 were associated with pregnancy, while 507 were in nonpregnant women. According to the clinical manifestation of the hemorrhage the latter patients were classified into eight distinct categories thus: 1. Menorrhagia, or profuse or prolonged flow in patients with otherwise normal menses. The sequence of events of the menstrual cycle in the ovaries and endometrium is undisturbed. The most frequent etiologic factor is any condition that interferes with the contractile power of the uterus or results in a hyperemia of the pelvic organs. 2. There is an irregularity in the time factor, the menstrual periods appearing too frequently, or are delayed, or are totally irregular in their occurrence. The main etiologic factor is to be sought in disturbances of ovarian function, which may be of a primary endocrine nature or secondary because of anatomic lesions. 3. (*a*) Hemorrhage initiated with a menstrual period may continue for a prolonged length of time. In these cases are mainly found lesions intimately connected with the endometrium, such as submucous fibromyomas and endometrial polypi, or definite pathologic changes such as hyperplasia of the endometrium or endometritis. (*b*) Continuous bleeding may set in during the stage of endometrial proliferation. The physiologic explanation may be found in a sudden destruction of the corpus luteum due to extension of an inflammatory process. (*c*) Bleeding during the endometrial stage of secretion is of unusual occurrence and may be partly due to the premenstrual hyperemia of the pelvic organs. 4. Hemorrhage may occur in the middle of the menstrual cycle at a time corresponding to the rupture of the graafian follicle, the so-called ovulation bleeding. 5. A type of hemorrhage characterizing hyperplasia of the endometrium is found when the menstrual periods become progressively more profuse or irregular and end finally in continuous bleeding. 6. Bleeding may occur following a period of amenorrhea in nonpregnant women of the childbearing age due to (*a*) hyperplasia of the endometrium, or (*b*) a traumatic or ulcerative lesion of the uterus following a previous removal or destruction of the ovaries. 7. Hemorrhage may occur at irregular times and without any connection with the events of the menstrual cycle, as a result of traumatic or ulcerative lesions of the cervix or endometrium resulting from new growths or inflammation. 8. Irregular hemorrhage due to the same causes as in group 7 may occur in women past the climacteric. In rare cases, ovarian new growths may also affect the endometrium and produce bleeding.

"Irregular Uterine Hemorrhage."—Through the hypodermic injection of an aqueous estrus producing hormone extracted from the placenta, Goldstine and Fogelson were able to control "irregular uterine bleeding" in about twenty-five out of thirty-one women. Thirteen of these twenty-five successfully treated patients were eased into their climacteric and the other twelve have had their irregular uterine bleeding changed into what resembles normal menstruation for from two to six months. A hysterectomy in two of the six failures disclosed an undiagnosed submucous fibroid. These results are of especial interest in view of the fact that Wintz reports the control of 95 per cent of all uterine hemorrhages due to ovarian dysfunction through the injection of a lipoid substance obtained from the placenta, whereas the authors used an aqueous derivative.

Study of Hemoglobin. Intra Partum and Post Partum.—From a study of the literature and an analysis of observations on 100 women intra partum and from five to seven days post partum, Harvey believes that the red cell count and cell volume percentage, during labor, are definitely lower than the usually accepted average, but the lowered observations in the presence of edema may, in part, be apparent rather than real. If the blood loss in labor is not excessive or the puerperium uncomplicated by fever, the blood values tend to rise by the fifth to the seventh day post partum. Neither social status nor parity affects the averages. It cannot be shown that low blood changes have a bearing on the length of labor or that long labor influences unfavorably the changes on the fifth to the seventh day post partum.

Artificial Rupture of Membranes.—The first part of the material of Guttmacher and Douglas was made up of women with normal pregnancies who presented themselves in the dispensary at or near term. They were then sent into the hospital and observed for twenty-four hours to be certain they were not in labor. Rupture of the membranes was done in these first cases to excite pains. When they had sufficiently demonstrated the usefulness of the membrane rupture method to induce labor in normal cases, abnormal cases were added to the material; namely, those in which it was advisable to end the pregnancy because of a toxemia, pyelitis, tuberculosis or cardiac condition, as well as for postmaturity in normal women. However, they largely restricted the study to the induction of labor in term pregnancies, the method being used only to induce one abortion and four premature labors. The method was studied in 120 cases, 115 being term pregnancies. On the basis of their observations, the authors conclude that labor at or near term can be successfully induced by artificial rupture of the membranes. The efficiency of this method is increased by the preliminary administration of castor oil and quinine. In their experience, this method is superior to both the bag and the bougie. This technic has decreased the average length of labor, lessened the incidence of puerperal infection, and did not affect the neonatal mortality.

Cervical Cesarean Section.—Phaneuf's study is based on 418 cervical cesarean sections (extraperitoneal 2, transperitoneal 58, intraperitoneal with a longitudinal cervical incision 160, and intraperitoneal with a transverse cervical incision 198). These operations were performed in thirty-one hospitals varying in equipment from that of the large metropolitan hospital to that of the small country hospital. The cervical cesarean section seems to fulfil the three main considerations claimed for it by its advocates; namely, protection against septic peritonitis, better healing of the incision, and an easier convalescence. The uncorrected maternal mortality was 5 per cent. The best maternal mortality statistics were obtained in 198 consecutive transverse cervical cesarean sections, in which it was 3 per

cent. Pulmonary embolism gave the highest maternal mortality rate, 1.19 per cent. For purposes of comparison, fifty-three consecutive classic cesarean sections with a high fundal incision were analyzed; the maternal mortality from pulmonary embolism was 3.7 per cent, three times higher than in the reported series of cervical cesarean sections. From this study it is apparent that pulmonary embolism is a frequent complication of cesarean section no matter what type is employed. This fact should be taken into consideration when deciding to perform an abdominal delivery. The gross fetal mortality was 5.9 per cent. The cervical cesarean section may be repeated with ease. The highest number performed on one woman was six. There were fourteen pelvic deliveries in eleven women following the cervical cesarean section. The puerperium, in all of them, was normal. In 105 repeated operations no intestinal adhesions were found. In performing the intraperitoneal operation, the author prefers the transverse cervical incision to the longitudinal. An efficient test of labor may be safely given in borderline cases, thus allowing a number of women to deliver themselves through the pelvis who otherwise might have been delivered abdominally.

Drinker Respirator Treatment of Asphyxia of New-Born.—According to Murphy and his associates, the Drinker respirator offers the best method of treating asphyxiated new-born infants. The principle of its action is sound. The negative pressure acts on each square inch of the chest equally, without the application of undue pressure at any point. The machine has already reached a high degree of perfection. The machine can be so adjusted that the normal rate and depth of breathing of the new-born infant can be closely approximated. Treatment is available at an instant's notice and may be carried on with the minimum expenditure of energy by the infant. If the latter is immature and later respiratory failure is likely to occur, the infant can live in the machine so that treatment can be started at a second's notice. The negative pressure chamber is so built that the body can be maintained horizontally or head down. The latter position is the best during treatment, since it aids the gravity discharge of fluids from the upper air passages. The infant can be maintained in surroundings of any temperature desired, above that of room temperature. At the same time its head is exposed to the cooler room temperature, which has a higher and therefore more desirable moisture content. The use of the Drinker respirator has passed the purely experimental stage; when employed, with the amount of negative pressure (8 to 10 cm.) and breathing rate (45 per minute) recommended, there need be no fear of injury to the infant. The apparatus is simple of construction and of operation.

Inhalation Method of Resuscitation.—For the nonbreathing new-born child, Henderson favors the simplest apparatus; namely, a small cylinder of a mixture of oxygen and 7 per cent carbon dioxide, a mask to enclose the face, and a rubber bag of only 2 or 3 liters capacity with a valve or stopcock at the end. The bag is filled and the cylinder shut off. The mask is held on the face while the bag is squeezed to make a gentle pressure sufficient to cause a succession of slight dilatations of the child's lungs. Then, as spontaneous breathing begins, the inhalation is continued or, if desired, mouth to mouth dilation may be used and then the inhalation administered. It is the inhalation and its stimulating effects on natural breathing rather than any form of artificial respiration that is most important. This inhalation should be given several times a day for five or ten minutes for several days. It should be administered not only to the asphyxiated but to all normal children as well. The object is to insure full dilatation of the lungs. When this inhalation is universally adopted, instead of the ancient practice of making the child cry, the vast number of children that now die of pneumonia consequent on continuing atelectasis during the neonatal period will be saved, in addition to those that can be resuscitated most effectively in this way from primary birth asphyxia. The essential point regarding birth asphyxia is that, as a result of diminished blood supply to the brain during prolonged labor, the sensitivity of the respiratory center is depressed. In the normal child the respiratory center is stimulated, as soon as the placental circulation slows down, by the carbon dioxide formed in the child's own body. In the asphyxiated child, although there may be more carbon dioxide than normally, the center is so depressed that this stimulus is insufficient to excite natural breathing. But when a sufficient percentage of carbon dioxide is administered to the lungs, the center responds quite normally.

American Journal of Orthopsychiatry, Menasha, Wis.

1: 239-336 (April) 1931

Psychiatry and Orthopsychiatry. D. M. Levy, New York.—p. 239.
Study of Problems of "Normal" Children. G. H. Preston and Winifred McLane Shepler, Baltimore.—p. 245.
Mental Acceleration at Adolescence and Related Problem of Mental Age of Adults. S. H. Tulchin, New York.—p. 257.
Evaluation and Management of Marital Situation in Foster Homes. Charlotte Towle, New York.—p. 271.
Early Factors in Formation of Personality. G. H. J. Pearson, Philadelphia.—p. 284.
Case Studies in Developmental Age. P. H. Furfey, Washington, D. C. —p. 292.
Quantitative Study of Relationship Between Basal Metabolic Rate and Children's Behavior Problems. J. Levy, New York.—p. 298.
Oral Habits in Children. W. C. Olson, Ann Arbor, Mich.—p. 311.

American Journal of Physical Therapy, Chicago

8: 1-36 (April) 1931

*Diathermic and High Frequency Currents in Neisserian Infections. B. F. Boland, Boston.—p. 5.
Therapy of Colon. L. J. Walker, Milwaukee.—p. 8.
Pneumonia and Diathermy. N. J. Seybold, Toledo, Ohio.—p. 16.
*Biterminal Active Electrodes: Technic for High Frequency Current Therapy. H. Goodman, New York.—p. 18.
Treatment of Chronic Rheumatic Disease by Physiobalneotherapy. W. A. Lieven, Aix-la-Chapelle, Germany.—p. 22.
Classification, Etiology and Therapy of Chronic Rheumatism. F. Gudzent, Berlin, Germany.—p. 25.

Diathermic and High Frequency Currents in Gonorrheal Infections.—Boland states that diathermic heat applied to the cervix produces an active hyperemia, leukocytosis and relief of pain. Cervical heat of from 41 to 45 C. does not inhibit the growth of the gonococcus either in vivo or in culture. Heat above 45 C. in the cervix produces coagulation. The cutting current is effective in the removal of diseased cervical tissue. Ionization of the cervix with the high frequency current can be carried on under local anesthesia. Tissue for biopsy can be obtained by the same method.

Biterminal Active Electrodes.—Goodman believes that the biterminal active electrode for coagulation is a tool worthy of continued use. The activity of the current seems to be restricted for all practical purposes to the tissue area between the two active electrodes. There is control of the area of activity, the depth of the action, and the intensity of coagulation. The apparatus can be adapted for many fields of surgical diathermy.

American Journal of Physiology, Baltimore

97: 1-231 (April) 1931

Tension Developed by Human Muscles at Different Velocities of Shortening. W. O. Fenn, H. Brody and A. Petrilli, Rochester, N. Y.—p. 1.
*Effect of Different Per Cents of Protein in Diet: Intake and Expenditure of Energy. J. R. Slonaker, San Francisco.—p. 15.
*Physiologic Action of Rattlesnake Venom (Crotalin): Activity of Protein Fractions of Crotalin. J. Markowitz, H. E. Essex and F. C. Mann, Rochester, Minn.—p. 22.
*Id.: Influence of Crotalin on Viscosity of Blood. E. J. Baldes, H. E. Essex and J. Markowitz, Rochester, Minn.—p. 26.
*Protein Content of Mammalian Lymph and Relation of Lymph to Tissue Fluid. C. K. Drinker and Madeleine E. Field, Boston.—p. 32.
Permeability of Capillaries of Dog to Protein. M. E. Field and C. K. Drinker, Boston.—p. 40.
Cell Content of Dog Lymph. Florence W. Haynes and Madeleine E. Field, Boston.—p. 52.
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Synthesis of Adequate Protein in Glands of Pigeon Crop. R. H. Carr and C. M. James, Indianapolis.—p. 227.

Effect of Different Amounts of Protein in Diet.—Slonaker fed five groups of rats continuously throughout life on diets containing 10, 14, 18, 22 and 26 per cent of protein. The results obtained indicate that a diet containing between 14 and 18 per cent of protein produces the greatest efficiency in maximal growth, spontaneous activity, reproduction and life span. They also show that during the growing period the diets containing the larger percentages of protein produce the greater percentages of gain in body weight.

Physiologic Action of Rattlesnake Venom.—Markowitz and collaborators found the characteristic activity of rattlesnake venom in the purified albumin fraction of the venom. The globulin fraction was inert, as was the protein free fraction. All efforts to separate the venom into several toxic components were unsuccessful. In the light of present data it must be considered as unproved that the toxic manifestations of crotalin are due to a number of substances.

Influence of Crotalin on Viscosity of Blood.—According to Baldes and his associates, the addition of crotalin to the blood of the dog in vivo or in vitro causes a marked increase in viscosity which is due to the increase in the volume of the erythrocytes, as the addition of crotalin to the plasma alone does not appreciably change its viscosity.

Protein Content of Mammalian Lymph.—Drinker and Field present tables showing the protein content of lymph as given in the literature for a variety of animals and as found by the authors in lymph from a variety of regions in the dog. Reasons are given for considering that lymph and tissue fluid are identical.

Histamine and Pilocarpine in Relation to Gastric Secretion.—In experiments on dogs, Vineberg and Babkin demonstrated that histamine activates selectively those cytologic elements of the gastric glands which secrete water, hydrochloric acid and other inorganic constituents, without affecting enzyme secretion. Pilocarpine activates chiefly the production of the organic substances and enzymes of the gastric juice. A combination of histamine and pilocarpine produces a synthetic gastric juice approaching normal.

Penetration of Light Through Human Skin.—Bachem and Reed state that visible and near infra-red rays are strongly absorbed by the blood of the corium and subcutaneous layers, with direct effects on the blood to be expected. The heating effect must be rather mild on account of the small absorption in the epidermis and the strong convection by the blood stream. The far infra-red has little penetrating power. Most of it is absorbed in the epidermis. The heat produced is slowly conducted away by the blood stream and by the air. Overexposure of the germinal layer may lead directly to blistering. There is greater variation in percentage penetration of ultraviolet than in other parts of the spectrum. At 280 millimicrons the absorption in the corneum and prickle-cell layers is pronounced. The great antirachitic effect of this wavelength must occur in or about these layers. On both sides of this band, near 300 and 250 millimicrons, the penetration is greater, more radiation reaching the stratum malpighii and the corium. These observations indicate that erythema production occurs in the germinal layer (or the corium) under the shadow of the upper layers. The stratum corneum and granulosum must play an important part in the light protection of these sensitive layers. From 250 millimicrons down the absorption in the horny layer increases rapidly. Near 200 millimicrons the absorption is so complete as to prevent any radiation from reaching the living layers of the skin.

Metabolism of Liver and Other Tissues.—Dock compared the rate of oxygen consumption of rats, fed on a diet containing 74 per cent casein and anesthetized with chlorbutanol, with that of controls fed on a diet containing no casein, immediately before and after ligating the blood supply of various regions of the body. The oxygen consumption of the kidneys, in terms of oxygen per minute per hundred square centimeters of body surface, was practically the same in the rats on high and in those on a low protein intake, although the total oxygen intake of the former group was 35 per cent greater than the controls on low protein. Urinary secretion was not measured and no conclusions as to renal metabolism are to be drawn from these observations. The oxygen consumption of the hind quarters was only 8 per cent greater in the rats on the high protein diet, while that of the abdominal viscera was 141 per cent greater during protein than during carbohydrate feeding. At least 85 per cent of the heat evolved as a result of the specific dynamic action of protein in rats anesthetized with chlorbutanol is liberated in the abdominal viscera. The significance of these facts is discussed in the light of previous observations by other workers, and it is concluded that the liver is probably the chief site, and possibly the only site, of the intermediary metabolism of those amino-acids which raise the metabolic rate, and that at least 80 per cent of the specific dynamic action of these acids is due to the increased energy liberated by the hepatic cells during protein digestion.

Effect of Histamine on Secretion of Pepsin.—Gilman and Cowgill studied the response of the pepsin secreting glands to histamine stimulation in seven gastric pouch dogs of the Pavlov and Heidenhain type. With increased volume of secretion in response to histamine stimulation there was a relative decrease in pepsin concentration indicative of the fact that the histamine had not stimulated pepsin secretion. A parallelism between pepsin and neutral chloride concentration in the gastric juice was also observed.

Effect of Fat Ingestion on Liver.—Rosenthal and Lillie state that lipemia, either spontaneous or experimentally produced, causes a slight impairment of liver activity as shown by a retention of bromsulphalein in the blood. This amounts to from 5 to 11 per cent fifteen minutes after injection of the dye. There is no increase in urobilinogen excretion in the urine and no elevation of bilirubin in the blood. If lipemia is produced in a dog whose liver has been previously damaged with chloroform or carbon tetrachloride, the retention of bromsulphalein amounts to from 20 to 40 per cent. Splenectomy and reticulo-endothelial cell blockade produce negligible disturbances in the removal of bromsulphalein from the blood. This is further evidence to that already obtained to show that this dye is removed from the blood almost entirely by the liver. Varying degrees of sustained lipemia were produced by feeding large amounts of cream to eight dogs for from one to twenty days. No appreciable amount of fat was taken up by the Kupffer cells as a result of these feedings.

Effects of Deficient Water Intake on Growth of Rat.—Jackson and Smith kept young rats at nearly constant body weight for several months by a restricted water intake, allowing food ad libitum. These test rats showed a progressively decreasing requirement for water up to the second or third month of the experiment, after which there was a tendency toward a slightly increasing requirement. The food consumption was roughly parallel with the water intake. These test rats became emaciated, with changes in appearance and in organ weights resembling those previously found by Kudo in similar but shorter tests. The organs also became variably dehydrated. "Restricted food" controls were given (with water ad libitum) the same amount of food as was voluntarily con-

sumed by the corresponding test rats. These control rats made a remarkable gain in body weight, ranging from 33 to 98 per cent. This gain was due solely to the increased water intake, since the other factors were held constant. These restricted food controls also became emaciated, but the changes, including those in organ weights and dehydration, were in general somewhat less than were found in the corresponding test rats. These differences likewise must be ascribed to the increased water intake. The importance of the water intake in growth, independent of the food consumption, is thus demonstrated.

American Journal of Psychiatry, Baltimore

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Encephalographic Studies in General Paresis. F. G. Ebaugh, H. H. Dixon, H. E. Kiene and K. D. Allen, Denver.—p. 737.
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Some Experiments on Effects of Caffeine, Adrenalin and Bromides on Susceptibility to Experimentally Induced Convulsions in Animals. J. Notkin and F. H. Pike, New York.—p. 771.
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*Diagnosis and Treatment of Acute Osteomyelitis of Head and Neck of Femur. K. H. Aynesworth, Waco, Texas.—p. 80.
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*Surgical Measures in Treatment of Lung Tuberculosis. A. Ehrenfried, Boston.—p. 95.
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Peptic Ulcer.—According to Maes, the medical treatment of peptic ulcers has a definite field, but the results are not permanent in the majority of cases; dietary and other restrictions must be rigorously observed; there is an inescapable element of risk; and the correction of coincidental intra-abdominal lesions is not possible by it. Surgical treatment must show, to justify its added risk, end-results at least as good as those of medicine, if not better. It is illogical to group gastric and duodenal ulcers in one surgical classification, for their pathology and life history demand their individual consideration. Gastro-enterostomy gives excellent results for duodenal ulcer and only slightly less good results for gastric ulcer. It is abused and it has its percentage of failures, but these facts are no warrant for the routine performance of the difficult and dangerous operation of gastrectomy for all peptic ulcers. Gastrectomy, even in the most skilful hands, has a higher mortality than gastro-enterostomy, and an equal percentage of subsequent marginal ulcers.

Fractional Gastric Analysis.—Bockus and his associates assert that the fractional gastric analysis as introduced by Rehfuss has not been given the importance it deserves in the routine study of the patient suspected of having duodenal ulcer. An extensive experience with the test carried out in the same way over a period of years has convinced them of its diagnostic value. They subjected the test to a critical review in 200 carefully selected cases of duodenal ulcer. The review stresses the significance of delayed motility as determined by the fractional analysis in the study of the patient with duodenal ulcer. Hypermotility was infrequent, occurring in only 2.5 per cent of the cases. One hundred and eight cases (54 per cent) showed various grades of motor delay. The importance of examination of the two-hour extraction as well as the fasting residuum from the standpoint of motor delay is shown. The increase in the quantity of fasting juice or the presence of microscopic or gross food in the overnight residuum has been stressed by many observers. Little attention has been given to the determination of motility at two hours. In many instances the hypomotility is insufficient to cause an excessive quantity of morning residue but the stomach will be unable to evacuate a normal test load within the two-hour period. A normally emptying stomach should contain less than 25 cc. of fluid and 5 cc. of food sediment two hours after the ingestion of the test meal. For purposes of analysis the authors considered 50 cc. of juice and 10 cc. of food the upper limit of normal.

Internal Drainage.—Faulkner defines internal drainage as the spilling of intrabronchial secretions from the diseased bronchus into the neighboring bronchi of either lung. This results in a dissemination of the infection and an obstruction of the air flow. Internal drainage is a causative factor in many of the deaths that occur following operations on patients with pulmonary abscesses, bronchiectasis, pulmonary tumors and pulmonary tuberculosis. These deaths have been ascribed previously to postoperative cardiac failure, bronchopneumonia, cerebral or pulmonary emboli, operative shock, or scopolamine toxicity. Postoperative pulmonary atelectasis (massive collapse) can be explained also on a basis of internal drainage. Aspirated pharyngeal secretions spill from place to place within the tracheobronchial tree, depending on the posture of the patient, and result either in an obstructive emphysema or obstructive atelectasis. These postoperative complications may be prevented if there is a careful choice of anesthetic, selection of proper posture, strict attention to hemostasis, and removal of excess intrabronchial secretions.

Acute Osteomyelitis.—Aynesworth states that acute osteomyelitis of the head and neck of the femur is limited in the early stages to a small focus. The symptoms of early infection are definite and characteristic and should lead to a correct diagnosis. Operation, preferably through the neck to the site of infection followed by drainage, usually leads to immediate recovery without the spreading of the infection to the adjacent bone. Operation after the infection has spread to the cortex and to the soft tissues usually does not stop the spread of the inflammation or prevent destruction of the bone and the joint with subsequent long invalidism and great deformity. Twelve cases are reported with ten early operations which were successful and two late cases which were failures.

Bacillus Acidophilus.—Portis and Albus summarize the results of a clinical and laboratory study of the therapeutic value of *Bacillus acidophilus* thus: 1. *B. acidophilus* can be implanted in the human intestinal tract and become the pre-

dominating flora. 2. Variable cultures of *B. acidophilus,* when administered in sufficient quantity and with regularity, are of benefit in the treatment of ailments directly or indirectly referable to disturbed function of the digestive tract. 3. *B. acidophilus* is antagonistic to a putrefactive type of flora and thus reduces their toxicogenic substances. 4. It was found of benefit in most of the authors' cases of chronic constipation and in some cases of mucous colitis and diarrhea. 5. In a single case of persistent typhoid carrier, disappearance of the typhoid organisms from the stool was coincident with the appearance of a predominantly aciduric type of fecal flora.

Lung Tuberculosis.—Ehrenfried stresses the fact that surgical measures designed to collapse the lung have become established as effective in the treatment of certain phases of pulmonary tuberculosis. A study of a series of cases reported from widely separated sources proves that these measures have prolonged many lives and restored persons in an apparently hopeless condition to effective usefulness. Physicians treating chest tuberculosis should be acquainted with the indications for these procedures, so that they can be applied promptly when judgment dictates. Sanatoriums should be provided with the surgical staff and equipment necessary for their performance.

Cardiospasm.—Winkelstein enumerates sixteen theories that have been advanced to explain the cause of cardiospasm, none of which seem sufficient to explain the majority of the cases. It is probable that cardiospasm is, in most of the instances, a symptom rather than an independent disease. Physiologically the disease can best be explained by postulating a disturbance of the nervous regulation of the cardia. Obviously, such a disturbance may be brought about in many ways. In a series of cases he was impressed by the prominence of psychic upsets at the beginning and during the course of the disease. Because it seems possible that there is a causal connection between these mental disturbances and the cardiospasm, this group of cases is submitted for consideration. All these patients had a complete examination to exclude disease elsewhere in the body, and theirs were not examples of slight or transient spasm of the cardia or esophagus but were true instances of chronic cardiospasm with marked dilatation of the esophagus.

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Ear Microscope: Its Description and Its Use as a Clinical Instrument. A. B. Potter, St. Louis.—p. 201.
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Ear in Head Injuries: Practical Considerations. W. E. Grove, Milwaukee.—p. 222.
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Taking Stock of Radical Mastoid Operation. H. B. Graham, San Francisco.—p. 267.
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Annals of Surgery, Philadelphia

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*Tumors of Carotid Body: Twelve Cases Including One of Bilateral Tumor. F. W. Rankin and W. L. A. Wellbrock, Rochester, Minn.—p. 801.
*Surgery of Phrenic Nerve in Treatment of Intractable Hiccup. C. Weeks, New York.—p. 811.
Trendelenburg's Operation for Pulmonary Embolism. A. Westerborn, Upsala, Sweden.—p. 816.
*Ligation of Abdominal Aorta for Aneurysm of Common Iliac Artery. G. P. LaRoque, Richmond, Va.—p. 819.
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*Bleeding Gastric and Duodenal Ulcers: Fifty-Two Cases. J. W. Hinton, New York.—p. 844.
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Surgical Treatment of Some Congenital Abnormalities of Genito-Urinary Tract. W. Walters, Rochester, Minn.—p. 862.
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Analysis of Seven Hundred Consecutive Appendectomies. L. W. Tasch and J. P. Spano, Minneapolis.—p. 899.
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Is Toxemia Cause of Death in Uncomplicated Intestinal Obstruction? H. E. Pearse, Jr., Rochester, N. Y.—p. 915.
Surgical Aspects of Ascariasis. E. I. Greene and J. M. Greene, Chicago.—p. 920.
Spinal Anesthesia: Analysis of 497 Cases. E. E. Arnheim and S. Mage, New York.—p. 929.

Tumors of Carotid Body.—Rankin and Wellbrock state that the magnitude of the surgical procedure for removal of tumors of the carotid body is influenced, in the main, by the necessity of ligation of one, two or three carotid vessels. The densely adherent tumor, which affixes itself in the carotid notch in such a manner as to make its dissection impossible without removal of some of the carotid vessels, is removed with difficulty and danger in proportion to the patient's age and the necessity of sacrificing not only the carotid vessels but adjacent structures, such as the cervical lymphatic apparatus, or the vagus nerve. The latter may be resected without much additional risk, but increase in the difficulty may be sufficient to increase the mortality. Ligation of the common carotid artery in adults, particularly those who are in the latter half of middle age and beyond, is an extremely serious procedure, which carries with it a rate of mortality ranging from 30 to 65 per cent. In the authors' series of twelve cases it was necessary to ligate the common carotid artery in three, and all of these patients succumbed in the first forty-eight hours. The external carotid artery of other persons was ligated twice but without undesirable sequelae or fatality. The tumor was excised in all the cases. Of the nine patients who survived the operation, seven are living and well. In eleven of the cases, five tumors were found to be malignant and six benign at the time of operation. In the case in which the tumors were bilateral, that of the left side was found to be malignant and that of the right benign, making a total of six malignant and seven benign tumors of the carotid body.

Surgery of Phrenic Nerve for Hiccup.—Weeks believes that in intractable hiccup, if all the usual methods of treatment fail, the patient should be examined fluoroscopically to determine which side of the diaphragm is involved. The phrenic nerve on the side involved should then be exposed under a local anesthetic and a stout silk ligature passed about it. The nerve can then be anesthetized. This effect apparently lasts about eight hours. Following this, traction should be tried, and if it fails the nerve can easily be exposed and crushed. If at the time of operation procaine hydrochloride block and traction both fail, it should lead one to believe that there is nerve anastomosis below the site of section or blocking and the nerve should then be avulsed. If both sides of the diaphragm are involved, then both phrenic nerves should be exposed and blocked either temporarily or permanently.

Ligation of Abdominal Aorta.—According to LaRoque, there are up to now on record eleven cases of complete and partial occlusion of the abdominal aorta in which the patients survived the operation long enough so that it was possible to note its effect on the disease. The cases he reports make a total of thirteen. Of these there were seven cases of complete occlusion by ligatures of silk or cotton, and six of incomplete occlusion, five by aluminum bands, one by cotton tape. In eleven cases, necropsies have been performed within from thirty-nine days to twenty-five months following operation.

Bleeding Gastric and Duodenal Ulcers.—Hinton reports fifty-two cases of bleeding gastric and duodenal ulcers. After studying these cases, it may seem confusing to determine how bleeding ulcers should be treated, but the cases of acute hemorrhages that proved fatal in spite of conservative treatment usually occurred in patients with negative or short gastric histories. The cases with chronic recurring hemorrhages can usually be controlled by conservative treatment; but whether they are permanently cured cannot be stated at present. Surgery seems indicated in chronic hemorrhages if the patient is incapacitated at frequent intervals. The type of operation can be decided on only after exploring the lesion, but if possible the ulcer should be cauterized or excised, plus whatever operative procedure may seem indicated. It is highly questionable whether partial gastrectomies are ever indicated in bleeding lesions, either of the stomach or of the duodenum.

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*Normal, Absent and Pathologic Tonsils in Young Women: Comparison of Histories. Ruby L. Cunningham, Berkeley, Calif.—p. 513.
*Chronic Endemic Ergotism: Relation to Vasomotor and Trophic Diseases. J. Kaunitz, New York.—p. 548.
*Multiple Pulmonary Abscesses Simulating Tuberculosis Caused by Friedländer Bacillus. H. C. Sweany, A. Stadnichenko and K. J. Henrichsen, Chicago.—p. 565.
*Streptococcic Septicemia with Vascular Lesions. J. M. Strang and K. Semsroth, Pittsburgh.—p. 583.
*Closed Intestinal Loop: Observations on Dogs with Jejunal and Ileal Loops and Chemical Analyses of Blood. G. E. Burget, K. H. Martzloff, R. C. B. Thornton and G. R. Suckow, Portland, Ore.—p. 593.
*Clear Fluid Test Meals (Water, Caffeine Solution, Alcohol) for Use in Fractional Gastric Analysis. A. L. Garbat, New York.—p. 601.
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Galactose Tolerance Test in Differential Diagnosis of Jaundice. H. Shay, E. M. Schloss and I. Rodis, Philadelphia.—p. 650.
*Diffusible Calcium of Blood Stream in Tetany. L. Gunther, Los Angeles, and D. M. Greenberg, Berkeley, Calif.—p. 660.

Tonsils in Young Women.—According to Cunningham, one third of 12,530 young white women who entered the university of California between 1920 and 1929 had had an operation for the removal of tonsils; one third were thought to have normal tonsils, and the remaining one third had pathologic tonsils, remnants of tonsils or buried or projecting tonsils to which no further designation was given. The group with normal tonsils and the group with pathologic tonsils differed by small percentages, which are statistically insignificant, in the incidence of the following diseases and operations reported in the histories: measles, mumps, chickenpox, whooping cough, scarlet fever, diphtheria, pneumonia, pleurisy, chronic colds, rheumatism, chorea, operations for appendicitis, mastoiditis, enlarged cervical lymph nodes and operations on the nose. The group with absent tonsils gave a history of higher incidence of all illnesses and operations than did either the group with normal tonsils or the group with pathologic tonsils. The fact that children who are often ill are the ones most frequently operated on is offered as a possible explanation for this higher incidence of illness. The proportion of the amount of illness reported before and after tonsillectomy suggests that the removal of tonsils had little influence in lessening the susceptibility to most infections. The lack of proper comparative data lessens the value of this conclusion. The age when the tonsils were removed had no influence on the total incidence of measles, mumps, chickenpox, whooping cough, pneumonia and influenza, but early removal seemed to have a slightly favorable influence on the incidence of scarlet fever and, to a less extent, on that of diphtheria. The effect of the age of removal on chronic colds, rheumatism and otitis media was not conclusive. A review of the literature relative to the effect of the condition of the tonsils on general health reveals a great lack of accurate information on the effect of tonsillectomy, when one considers the number of operations that have been performed. There is a growing tendency to question the value of tonsillectomy as a prophylaxis against infectious diseases and as a preventive measure or cure for such systemic diseases as rheumatism, chorea and carditis.

Chronic Endemic Ergotism.—Kaunitz discusses some etiologic factors, symptoms, physical signs and pathologic manifestations about a group of vasomotor and trophic disturbances (thrombo-angiitis obliterans, Raynaud's disease, erythromelalgia, acrocyanosis, scleroderma, sclerodactylia and dermatomyositis) and considers the relation of this vasomotor and trophic group of conditions to ergotism in human beings and that produced experimentally. It has been shown that ergot infests the rye fields of the United States, occasionally in dangerous quantities. In a study of thrombo-angiitis it has been shown that, in patients having this disease, rye bread forms a large part of the diet. A more careful study, which will correlate the diet with these vasomotor and trophic diseases, is necessary. In view of the knowledge of the effects of toxic ergot, it appears advisable to employ more stringent prophylactic measures, even before there is absolute proof of the author's suggestion that many cases of vasomotor and trophic diseases are due to the ingestion of ergot.

Pulmonary Abscesses.—Sweany and his associates discuss the clinical course and the pathologic and bacteriologic observations of a fatal, chronic infection with Friedländer's bacillus. The micro-organism differed from that ordinarily described in that it grew as well anaerobically as aerobically, if not better; it grew poorly on potato medium, it fermented lactose with acid and gas, and it produced coagulation in milk. The pathologic condition was that of a subacute to chronic bronchopneumonia with progressive necrosis and abscess formation exhibiting a type of cell reaction that varied from lymphocytes, monocytes and plasma cells to focal abscesses of polymorphonuclears. Fibroblasts and connective tissue appeared about and within the older lesions, and the walls of the cavities became lined with metaplastic cuboidal or squamous epithelium. An important feature of the disease is the continuous succession of lesions usually from the apex to the base of the lung, each of which passes through the same evolution and changes from the acute to the chronic form. The clinical aspects closely simulated chronic pulmonary tuberculosis, differing from it only in the general appearance of the patient, the irregularity in temperature and the obscure physical observations. The roentgen observations resembled those noted in chronic pulmonary tuberculosis.

Streptococcic Septicemia.—Strang and Semsroth report an unusual case of sepsis due to *Streptococcus viridans*, with chronic and acute pancarditis and chronic and subacute nephritis. A characteristic lesion that was found in the arterioles of both heart and kidneys is described at length. This lesion is regarded as causal to the secondary degeneration of both heart and kidneys. The possible relationship of anatomic lesions and clinical course in a case of this type to low virulence of the invading organism and the absence of acute reaction on the part of the host is discussed and contrasted with more fulminating processes.

Closed Intestinal Loop.—Burget and his associates have kept dogs with closed intestinal loops (ileum and jejunum) alive for periods of from several months to more than a year by aspirating the loop and preventing overdistention. After the first ten days, tapping becomes unnecessary except at infrequent intervals. The loops in the ileum are distended less frequently than those in the jejunum. There is no difference in the clinical condition during recovery between animals with jejunal loops and those with loops in the ileum. Closed loops in dogs that have made an uneventful recovery are normal histologically; physiologically, they digest and absorb food substances at a normal rate. When absorption and secretion tend to remain balanced and the loop is not washed out, it gradually fills with a thick, gray, putty-like substance. The chemistry of the blood was practically normal throughout the uncom-

plicated recovery of these animals. Distention of the loop accompanied by vomiting or rupture of the loop, with peritonitis and vomiting, causes some fall in the blood chlorides and a moderate rise in nonprotein nitrogen.

Fractional Gastric Analysis.—Garbat employed clear fluid meals of plain water, an alcohol solution and a caffeine solution. The secretions following their ingestion were compared with those after a meal of tea and toast. In 65 per cent of the cases the results of these three test meals were practically the same, so that any one can be employed in a fractional gastric analysis instead of the Ewald-Boas meal. The differing results in the remaining 35 per cent of the cases need not necessarily be explained on the basis of the different constituents of the test meals; they can as well be attributed to the variations occurring in aliquot fractions obtained during a single analysis, and to the individual variations in a patient from day to day. The former factor has been definitely shown by the work of Kopeloff, while the latter has been proved by the author in the series of experiments in which repeated examinations on three successive days showed widely varying results with the same type of test meal. Of these clear fluid meals, alcohol is the most stimulating to gastric secretion; it is more stimulating than the Ewald-Boas meal. The water meal is undobtedly the simplest; it can be used any place or any time without preparation. It compares favorably with the other meals; in fact, the stimulating effect of the caffeine meal or the Ewald test meal may be due to the water element, as water is undoubtedly a strong gastric stimulant. However, there are occasional persons who do not secrete free hydrochloric acid in response to water, so that anacidity following a water meal must be controlled by an Ewald-Boas meal or by the use of histamine.

Blood Calcium in Tetany.—Gunther and Greenberg point out that the analysis of the total amount of calcium in the serum is not a reliable guide to the state of muscular hyperirritability in juvenile and parathyroid tetany. The determination of the diffusible calcium fraction in the serum offers a better criterion in such conditions. Their work points to a value of 3.5 mg. per hundred cubic centimeters or less of diffusible calcium as being associated with clinical symptoms of active tetany. Tetany due to an alkaline shift in the acid-base balance, namely, tetany due to hyperventilation and an overdosage of bicarbonate, shows no decrease in the diffusible calcium and is therefore probably not associated with a lowering of the concentration of ionic calcium.

Arch. of Physical Therapy, X-Ray, Radium, Chicago

12: 197-253 (April) 1931

Sunlight, Nutrition and Metabolism: Calcium Absorption and Assimilation. V. E. Levine, Omaha.—p. 197.
Treatment of Malignant Tumors of Urinary Bladder by Diathermy. B. Lewis and G. Carroll, St. Louis.—p. 215.
Prostatic Hypertrophy: Transurethral Electrosurgery of Prostate. J. Frischer, Kansas City, Mo.—p. 217.
Present Status of Electrocoagulation of Tonsils. F. J. Novak, Jr., Chicago.—p. 226.
Hypertension. W. W. Worster, San Gabriel, Calif.—p. 229.

Arkansas Medical Society Journal, Little Rock

27: 217-244 (April) 1931

Individualism in Medicine. A. G. Henderson, Jonesboro.—p. 217.
Practical Applications of Blood Chemistry in Urologic Conditions. H. K. Wade and H. C. Chenault, Hot Springs National Park.—p. 218.

California and Western Medicine, San Francisco

34: 233-330 (April) 1931

Review of Secondary Anemias: Part 1. O. H. P. Pepper, Philadelphia.—p. 233.
Heart Rate and Size: Their Importance to Physician. W. Dock, San Francisco.—p. 236.
Epilepsy. H. Hopkins-Detrick, San Francisco.—p. 240.
Cancer of Larynx. S. Jesberg, Los Angeles.—p. 246.
Lead Intoxication. E. H. Falconer, San Francisco.—p. 250.
Endocervicitis—Its Etiology, Pathology and Treatment. T. W. Bath, Reno, Nev.—p. 255.
Epinephrine and Related Drugs: Circulatory Responses and Modifications By Local Anesthetics. M. L. Tainter, San Francisco.—p. 259.
Agranulocytic Angina. S. Kahlstrom, Los Angeles.—p. 261.
Giardiasis in Children. S. J. McClendon, San Diego.—p. 266.
Chylothorax. R. G. Van Nuys, Berkeley.—p. 269.
Galen: Greek, Medievalist and Modern. Part 1. S. V. Larkey, San Francisco.—p. 271.

Canadian Public Health Journal, Toronto

22: 163-216 (April) 1931

Travelling Diagnostic Chest Clinic. G. C. Brink, Ontario.—p. 163.
County Health Unit as Solution to Problem of Infant Health in Rural Districts. A. Lessard, Quebec.—p. 174.
Problem of Late Registrations. S. J. Manchester, Ontario.—p. 178.
Treatment of Tetanus: Two Cases. N. Silverthorne and A. P. Hart, Toronto.—p. 181.
Registration Problems in Saskatchewan. S. Muirhead, Saskatchewan.—p. 185.

Johns Hopkins Hospital Bulletin, Baltimore

48: 193-260 (April) 1931

*Prognosis of Acute Glomerular Nephritis in Childhood. Harriet G. Guild, Baltimore.—p. 193.
*Pathology and Pathogenesis of Scleroderma. G. Rake, Baltimore.—p. 212.
Persistence of Accelerated Rate in Isolated Hearts and Isolated Auricles of Thyrotoxic Rabbits: Response to Iodides, Thyroxine and Epinephrine. J. K. Lewis and D. McEachern, Baltimore.—p. 228.
Outgrowth of Endothelium and Capillaries in Tissue Culture. W. H. Lewis, Baltimore.—p. 242.

Acute Glomerular Nephritis in Childhood.—From a study of thirty-four patients examined from one to twelve years after an attack of acute glomerular nephritis, Guild concludes that in this condition in children the prognosis is good, and, in general, the younger the child, the better the prospect of complete recovery. Albuminuria may persist for years without impairment of general health or kidney function. It may also disappear completely after it has been present at least as long as a year. Children who have once had acute nephritis stand subsequent infections without greater liability to complicating renal disease than is shown by children who have never had nephritis. Although many of the patients are now entirely normal in spite of neglect of foci of infection following the attack of nephritis, the fact that several of those now showing some abnormality are among those neglected makes one feel that it is wise to attend to such foci promptly in all cases. It is of the utmost importance to follow these patients with albuminuria to determine the ultimate prognosis. From the results of these examinations it seems quite possible that some may yet clear entirely, and that those who fail to clear will continue to do well for many years in spite of the albuminuria.

Pathogenesis of Scleroderma.—Rake describes a case of scleroderma associated with Raynaud's disease and dilatation of the esophagus and colon. Lesions were present in the cervical sympathetic ganglion cells, and the peripheral arteries showed an endarteritis. The relation of the anatomic changes to the clinical symptoms and signs is discussed and the present state of the knowledge on the subject reviewed.

Journal of Bacteriology, Baltimore

21: 61-138 (Feb.) 1931

Reciprocal Effects of Relationship of Bacteriology and Medicine. S. Bayne-Jones, Rochester, N. Y.—p. 61.
*Bacillus Diphtheriae in Its Relationship to Bacteriophage. G. H. Smith and Elizabeth F. Jordan, New Haven, Conn.—p. 75.
Marine Denitrifying Organism. B. Lloyd.—p. 89.
Saprophytic and Secondary Micro-Organisms Occurring in Respiratory Tracts of Domestic Fowls and Chickens in Health and in Disease. C. S. Gibbs, Amherst, Mass.—p. 97.
Effect of Temperature on Production of Hydrogen Sulphide by Salmonella Pullorum. R. P. Tittsler, State College, Pa.—p. 111.
*Modified Loeffler's Blood Serum Medium Useful in the Routine Health Department Examination for Diphtheria and Streptococcus Infections. L. S. Medalia, K. R. Bailey and Catherine Atwood, Boston.—p. 119.

Bacillus Diphtheriae and Bacteriophage.—As sources for bacteriophage, Smith and Jordan used a variety of materials. Two sewage filtrates were tested, stool filtrates from a diphtheria patient at different periods during the disease, stool filtrates from a convalescent diphtheria case, blood from a patient convalescent from a streptococcus infection in which the blood culture showed organisms of the diphtheroid type; stool, urine and throat washings from a diphtheria carrier; stool filtrates from an untreated, fatal case of diphtheria; and throat washings from normal persons, as well as stool filtrates from normal persons and culture filtrates of the first isolation of the Wright strain. Races of bacteriophage exhibiting a greater or less degree of potency were recovered from many of these sources. In all, eleven races of bacteriophage were secured. The authors believe that diphtheria bacteriophage is fully as common as is bacteriophage for *Bacillus coli* or for pyogenic cocci. Its

demonstration in sewage, in patients, in convalescents, in field cultures, and under certain circumstances in dust and air suggests that it may play a significant part under many circumstances and offers to the epidemiologist an additional point of attack in the study of those conditions governing the behavior of communicable disease.

Modified Loeffler's Blood Serum Medium.—Medalia and collaborators describe a blood serum medium which is almost a selective culture medium for *Corynebacterium diphtheriae*. It is easy to prepare, since it is only Loeffler's medium, modified by the addition of 4.5 per cent normal sodium hydroxide yielding a final p_H of 7.6, bromthymol blue being used as an indicator. The possibility of checking the reaction in the final mixture by the p_H "colorimetric" method makes this culture medium easy to duplicate and yields uniform results. In definitely controlled studies, the positive results on the modified Loeffler's medium are more than four times as many as on the routine medium. The ease with which this modified Loeffler's medium grows *C. diphtheriae*, almost in a selective way, permits the examination to be made in a much shorter time and the positives are more readily discernible.

Journal of Industrial Hygiene, Baltimore

13: 85-116 (March) 1931

Method of Staining Asbestosis Bodies Found in Sputum of Asbestos Workers. S. R. Gloyne, London, England.—p. 85.
Toxicity of Certain Benzene Derivatives and Related Compounds. H. F. Smyth, Philadelphia.—p. 87.
Studies on Experimental Pneumonoconiosis: VI. Inhalation of Asbestos Dust: Its Effect on Primary Tuberculous Infection. L. U. Gardner and D. E. Cummings, New York.—p. 97.

Journal of Infectious Diseases, Chicago

48: 339-417 (April) 1931

*Therapeutic Antimeningococcus Serums: Neutralizing Potency as Measured by Phenomenon of Local Skin Reactivity. G. Shwartzman, New York.—p. 339.
Experimental Production of Scarlet Fever by Means of Scarlatinal Hemolytic Streptococcus. T. Toyoda, Y. Futagi and M. Okamoto, Dairen, Manchuria.—p. 350.
*Limitations of Phenol Coefficient Tests in Determining Germicidal Activities. G. F. Leonard, New Brunswick, N. J.—p. 358.
Organic Antiseptics. W. E. Drake and F. Dunning, Baltimore.—p. 366.
*Factors Influencing Prevalence of Spreaders on Agar Plates in Bacteriologic Examination of Milk. F. Boerner and M. O. Robinson, Philadelphia.—p. 372.
*Effect of Killed Cultures and Filtrates of Brucella Abortus in Prevention of Infection in Guinea-Pigs. R. Gwatkin, Toronto.—p. 381.
Search for Brucella Bacteriophage. R. Gwatkin, Toronto.—p. 404.
Bacterial Growth in Udders of Living Cows Compared with That in Udders Following Death and Removal of Blood Supply. H. R. Curran, Washington, D. C.—p. 408.
Direct Count of Colon-Aerogenes Organisms: Possibilities and Promise. F. O. Tonney and R. E. Noble, Chicago.—p. 413.

Therapeutic Antimeningococcus Serums.—Shwartzman measured the potency of antimeningococcus therapeutic serums and certain experimental immune serums by means of the phenomenon of local skin reactivity. It was found that the majority of the serums that are at present applied therapeutically are poor in neutralizing antibodies. A prolonged period of immunization with toxic filtrates and live cultures proved necessary for the development of potent serums. There was demonstrated group and "variant" specificity of meningococcus toxic filtrates. The author describes a new plan for the preparation of polyvalent therapeutic meningococcus serums.

Phenol Coefficient Tests.—According to Leonard, the regular phenol coefficient test is useful in determining the germicidal activity of products that are chemically related to phenol. The test has its limitations when applied to silver preparations or to other products that have high bacteriostatic action. By adding the transfer test to the regular phenol coefficient test, one can readily determine which products are actually germicidal and which have only a restraining effect on bacterial growth. A method has been devised for determining the antiseptic or growth restraining action of various products. It is known as the G-R (growth-restraining) test. It is applicable even though the test material clouds the medium, as occurs with certain silver preparations. Both mild and strong silver protein preparations have high bacteriostatic action, restraining typhoid and staphylococcus cultures in dilutions of from 1:5,000 to 1:20,000. Colloidal silver iodide preparations have a feeble bacteriostatic action, restraining growth only in dilutions of 1:50 or 1:100.

Examination of Milk.—Boerner and Robinson found that the occurrence of spreaders on agar plates used in counting milk was not due to faulty sterilization or to faulty technic. The condition of the surface of the agar influences the spreading of surface colonies. The depth of agar greatly influences the spreading of colonies of *Bacillus subtilis* and *Bacillus proteus*. Spreading of surface colonies can be prevented by allowing the plates to dry over night or by decreasing the amount of agar used. The occurrence of spreaders on milk plates was efficiently controlled by limiting the amount of agar used to 10 cc. per plate.

Brucella Abortus.—In the first experiment described by Gwatkin, guinea-pigs were infected by feeding a suspension of *Brucella abortus* and also by instilling one drop into the eye. The lesions were the same as those produced by intraperitoneal injection. Four experiments were then carried out in which groups of guinea-pigs were given injections, in some cases by the subcutaneous and in others by the intraperitoneal route, of killed suspensions and filtrates of *Brucella abortus*. The agglutinin responses were recorded weekly throughout the experiments, and in one experiment ten daily bleedings were made. The titer produced by any of these preparations did not exceed 1:500 and with some of the filtrates was low. The serums of these animals were shown, with one exception, to have as high complement fixing qualities as those of the animals treated with the bacterial suspension. In the second experiment the infecting dose was insufficient, as shown by the controls, but the groups treated with the heated suspension and with the unheated filtrate, respectively, developed well marked lesions. In the third experiment, in which the same immunizing agents were employed as in the second and in which the infecting dose was increased, all guinea-pigs presented well marked lesions and gave no evidence of protection. The only pregnant animal used in this experiment aborted three weeks after infection, and *Brucella abortus* was recovered from the placenta. In the fourth experiment (with ground bacterial extract and suspension) the results were not as clear cut, but all animals showed changes in the spleen, and *Brucella abortus* was recovered from this organ in all cases. In the fifth experiment, in which a formaldehydized suspension was employed, there was no evidence of protection from thirty injections. Lesions were as well marked as in the controls.

New Orleans Medical and Surgical Journal

83: 671-752 (April) 1931

Cancer Situation as Layman Should See It. C. J. Miller, New Orleans.—p. 671.
Cancer Problem from Public Standpoint. A. Vidrine, New Orleans.—p. 674.
New Bandage for Treatment of Fractures of Pelvis. E. D. Martin, New Orleans.—p. 678.
Roentgen Diagnosis of Gallblädder Disease. G. M. Street, Vicksburg, Miss.—p. 679.
Surgical Mortality: Its Meaning for Operator. W. Bartlett and W. Bartlett, Jr., St. Louis.—p. 683.
Composite Statistical Study of Charity Hospital Surgical Deaths. F. L. Loria, New Orleans.—p. 688.
Experience with Recent Methods in Treatment of Pulmonary Tuberculosis. C. Jamison, New Orleans.—p. 693.
Four Cases of Hodgkin's Disease Treated with Radium. H. E. Guerriero, Monroe.—p. 698.
Rectal Anesthesia in Obstetrics. L. J. Bienvenu, Opelousas.—p. 705.
Otitis Media. J. A. Wilkinson, Homer.—p 710.
Chordoblastoma: Case E. H Lawson, New Orleans.—p. 714.

Texas State Journal of Medicine, Fort Worth

26: 847-924 (April) 1931

Fractures of Neck of Femur. G. W. N. Eggers, Galveston.—p. 857.
Suture of Ulnar Nerve. J. A. Heyman, Wichita Falls, and P. K. Conner, Archer City.—p. 861.
Peptic Ulcer, from Viewpoint of Internist. M. L. Graves, Houston.—p. 864.
Peptic Ulcer, from Viewpoint of Roentgenologist. R. T. Wilson, Temple.—p. 866.
Effect of Chemical Agents on Optic Nerve. A. E. Jackson, Fort Worth.—p. 869.
Significance of Failing Vision. J. G. Jones, Dallas.—p. 873.
Strabismus, Its Management and Correction. S. Jenkins, Dallas.—p. 876.
Study of Retinal Findings in the New-Born. C. S. Sykes, Galveston.—p. 878.
Typhus Fever: Case. J. B. Shannon, Fort Worth.—p. 883.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Brain, London

53: 391-556 (Jan.) 1931

Disseminated Sclerosis in North Wales: Inquiry into Incidence, Frequency, Distribution and Other Etiologic Factors. R. S. Allison.—p. 391.
Central Mechanism of Reflex Arc. E. A. B. Pritchard.—p. 431.
Clinical and Anatomic Studies on Two Cats Without Neocortex. G. Schaltenbrand and S. Cobb.—p. 449.
Intracranial Aneurysms. M. Schmidt.—p. 489.

British Journal of Children's Diseases, London

28: 1-88 (Jan.-March) 1931

*Enuresis. L. Mandel.—p. 1.
Complete Mindlessness (Lowest Degree of Idiocy) and Cerebral (Cortical) Diplegia, After Status Convulsivus Associated with Ether Anesthesia. F. P. Weber.—p. 14.
Measles Encephalitis: Two Fatal Cases. E. C. Benn.—p. 22.
*Case of Calcinosis Universalis and Suggested Method of Treatment. J. Craig and A. Lyall.—p. 29.
Note on Congenital Developmental Diseases. F. P. Weber.—p. 34.

Enuresis.—To make types of enuretic patients clinically more easily recognized and with a view to choosing the approved therapeutic measures which should be adopted, Mandel divides these patients into five groups, thus: 1. Those in whom some palpable physical irritating stimuli exist (worms, overdistention of bladder, cystitis, and so on). The treatment is obvious. 2. The hypersensitive, neuropathic or nervous type, in which the instability is a symptom which may be regarded in the same light as other symptoms, such as cyclic vomiting, ketonuria and vagotonia, which are more commonly found in the nervous child. They respond to dietetic and medicinal measures combined with readjustment of environment and gentle reeducation. 3. The so-called psychopathic child, in whom the enuresis is more a behavior complex. The treatment required is for the most part psychologic. 4. Endocrine dysharmony, particularly hypothyroidism, which leads to a loss of inhibition. Giving thyroid in small doses is indicated, while solution of pituitary by its tonic effect on unstriped muscle is a good adjuvant. 5. The debilitated child, often convalescent from some illness. General tonic treatment is indicated. In all cases atropine or belladonna is the specific drug of choice. In the management of the case the closest cooperation and patience between the physician, the child, the parent and the teacher is essential.

Case of Calcinosis Universalis.—Craig and Lyall report a case of calcinosis universalis in a child, aged 5 years. It is suggested that sodium phosphate given by mouth may be of value in the treatment of this condition, and the rationale of the treatment is discussed.

British Medical Journal, London

1: 611-652 (April 11) 1931

*Some Tendon Ruptures. H. Platt.—p. 611.
Miners' Nystagmus. W. E. Cooke.—p. 615.
*Coronary Thrombosis and Myocardial Infarction, with Glycosuria. N. Cruickshank.—p. 618.
*Pleural Effusion. L. S. T. Burrell.—p. 619.
Bath Treatment for Deafness. J. Adam.—p 621.
*Chylous Ascites Complicating Abdominal Lymphadenoma T. A. Pratt and H. W. O. Frew.—p. 622.
Surface Tension of Serum in General Paralysis: Aid to Diagnosis. B. H. Shaw.—p. 623.

Tendon Ruptures.—Platt divides tendon ruptures into two main groups: 1. The common rupture, produced by the sudden powerful overstretching of a muscle already in a state of contraction. Well known examples of this type are disinsertion of the extensor tendons of the fingers, and ruptures of the achilles tendon rectus femoris, and ligamentum patellae. 2. A less common and more insidious form of rupture (spontaneous rupture) seen in certain tendons which occupy a bony groove. In these circumstances the rupture is determined by a preexisting adhesion of the tendon, which gradually becomes attenuated and ultimately snaps across in response to a comparatively trivial violence. The tendons most liable to rupture by this process of attrition are the extensor longus pollicis and the long head of the biceps. Tendon ruptures may also be classified according to the site of the tear, which may take place (*a*) at the musculotendinous junction, (*b*) in the tendon itself, or (*c*) at the point of insertion. Tears in the neighborhood of the musculotendinous junction are almost invariably incomplete and from a functional standpoint are equivalent to partial tears of the muscle belly (lesions usually included under the generic title "strain"). The author considers mainly the problems of early diagnosis and operative repair in some of the more important complete ruptures. The subject is illustrated by references to typical tendon ruptures selected from his own cases.

Coronary Thrombosis with Glycosuria.—Cruickshank describes a case in which syphilitic aortitis, coronary thrombosis and extensive myocardial infarctions were associated with glycosuria and hyperglycemia. Widespread atheroma with degenerative and fibrotic changes in the kidneys and pancreas and chronic inflammation in the biliary tract were found at necropsy in addition to the cardiac lesions. The relationship between glycosuria and coronary thrombosis is discussed. It is considered more probable that these two conditions result from a common cause (vascular degeneration) than that glycosuria is an etiologic factor in the production of coronary thrombosis.

Pleural Effusion.—Burrell regards every case of pleural effusion as of tuberculous origin unless some other definite cause for it can be found. It is necessary to take a few cubic centimeters of the fluid for analysis as soon as a diagnosis is made, but, apart from this, aspiration should not be performed except for one of three reasons, namely, to relieve urgent pressure symptoms, or to treat a patient in whom the fluid is not being absorbed naturally, to convert an effusion into a pneumothorax if the underlying lung has active disease, and to allow the lung to reexpand if there is active disease spreading in the other lung. With regard to the first indication, it is not often necessary to aspirate, as almost always the fluid becomes absorbed in time. There is usually a rise of temperature at the beginning; this may continue for several weeks, suggesting an empyema, but in time the temperature will fall without aspiration, unless there is active disease in the lung. If the elevation of temperature persists and the patient is ill after six weeks, some of the fluid should be aspirated, but if more than 10 ounces is removed it is best to replace the fluid with air or oxygen. Air should be used if it is intended to make a permanent pneumothorax, but oxygen, which is more quickly absorbed than air, is indicated if one wishes the lung to reexpand. If, in spite of removing some of the fluid, the temperature does not descend, the remaining fluid should be completely aspirated and replaced with air or oxygen. In this case, however, it is almost certain that there is active disease in the underlying lung, and as the lung reexpands it should be carefully examined for any sign of disease, and repeated roentgen examinations should be made. One must remember that tuberculosis starts in the lung and spreads into the pleura; it does not start in the pleura and spread back into the lung; consequently when one sees a case of pleural effusion one should assume that there is disease in the lung, although in most cases it is not active and does not develop into clinical disease. Some 40 per cent of cases, however, do go on to clinical tuberculosis, and for this reason it is necessary to keep a patient under careful supervision and give him thorough after-treatment following pleural effusion.

Chylous Ascites and Abdominal Lymphadenoma.—Pratt and Frew state that in most of the recorded cases of lymphadenoma, more especially of the abdominal type, the diagnosis has been difficult, the condition being mistaken for tuberculosis, syphilis, sarcoma and other tumors. In a case reported by them the initial diagnosis was one of tuberculosis, and, although repeated examinations failed to confirm this opinion, it was only after microscopic examination of a section of the tumor tissue obtained at the postmortem examination that the final diagnosis of lymphadenoma could be made. It is of interest, too, that while the superficial lymph nodes were not appreciably affected, the spleen showed gross involvement. The latter fact has led certain observers to recognize what they term the splenic type of abdominal lymphadenoma. Other noteworthy points were the absence of involvement of the ali-

mentary tract apart from the slight infiltration of the stomach wall, the relatively slight involvement of the liver, and the freedom of the kidneys from any evidence of new growth.

Glasgow Medical Journal

34: 161-216 (April) 1931

Treatment of Circulatory Failure. W. T. Ritchie.—p. 161.
Observations on Cancer of Breast in Light of Experimental Cancer Research. D. F. Cappell.—p. 181.
Rupture of Chordae Tendineae Following Scarlet Fever. H. W. O. Frew. —p. 195.

Irish Journal of Medical Science, Dublin

64: 145-192 (April) 1931

Precursors of Harvey. T. P. C. Kirkpatrick.—p. 145.
Brucella Abortus in Relation to Man in Ireland. J. W. Bigger.—p. 150.
Survey of Health of Dublin School Child. Mary M. O'Leary.—p. 155.
Gwathmey Anesthesia in Labor. O. Browne.—p. 162.
Severe Case of Ruptured Ectopic Gestation. D. J. Cannon.—p. 169.
Ruptured Tubal Pregnancy. B. Solomons.—p. 173.
Case of Infantile Scurvy. R. W. Shaw.—p. 175.
Cases of Hypermetropia Developing During Treatment in Diabetes Mellitus. E. M. Maxwell.—p. 179.

Journal of Hygiene, London

31: 125-289 (April) 1931

*Incidence of Cancer of Bladder and Prostate in Certain Occupations. S. A. Henry, N. M. Kennaway and E. L. Kennaway.—p. 125.
Further Experience of Bismuth Sulphite Media in Isolation of Bacillus Typhosus and Bacillus Paratyphosus from Feces, Sewage and Water. W. J. Wilson and E. M. M. Blair.—p. 138.
Lethargic Encephalitis: Glasgow Epidemic of 1923. A. Main.—p. 162.
Spermicidal Powers of Chemical Contraceptives: Pure Substances. J. R. Baker.—p. 189.
*Clinical Value of Combined Kahn and Wassermann Tests in Tropics, with Especial Reference to Yaws and Syphilis. H. J. O. Burke-Gaffney.—p. 215.
Serologic Varieties of Typhus Fever. A. Felix and M. Rhodes.—p. 225.
*Examination of Tissues and Some Observations on Blood Platelets of Rabbits at Intervals of Five Minutes, and Later, After Intravenous Inoculations of Staphylococcus Aureus and India Ink. L. S. Dudgeon and H. K. Goadby.—p. 247.
Contributions to Experimental Study of Epidemiology: Effect of Vaccination on Herd Mortality. M. Greenwood, W. W. C. Topley and J. Wilson.—p. 257.

Incidence of Cancer of Bladder and Prostate in Certain Occupations.—Henry and his associates present the results of an examination of death certificates of cases of cancer and papilloma of the bladder in both sexes, and of cancer of the prostate, from England and Wales between 1921 and 1928. The total number of certificates examined was 13,965. It was noted that in eight out of ten occupations associated with exposure to coal gas, tar, pitch or soot the incidence of cancer of the bladder is greater than that found in the general male population, and in five of the ten it is from one and a half to four times as great. Three of these occupations show the highest figures for incidence of cancer of the bladder observed among the forty-six occupations investigated. The corresponding data for cancer of the prostate gave less consistent indications of an occupational liability.

Clinical Value of Combined Kahn and Wassermann Tests in Tropics.—Burke-Gaffney tested serums from 500 patients, mostly natives of East Africa, by the Kahn and Wassermann tests. Clinical data were available in the case of 448 specimens. The results of tests on 230 serums from cases believed to be yaws and syphilis and 218 cases believed not to be yaws and syphilis are discussed. In 46 of the 230 cases, treatment had previously been given. In interpreting the results, the resolutions of the League of Nations conference on the serodiagnosis of syphilis were strictly followed. In the performance of the tests, recognized standard methods were used. The two tests correlated exactly in 96.4 per cent of all cases. The Kahn test was the more sensitive to yaws and syphilis. The Wassermann test alone gave one nonspecific reaction. The reagents used in the Kahn test did not deteriorate when kept for two months at room temperature. It is suggested that, although the use of both tests is preferable when practicable, the Kahn test alone is a reliable diagnostic measure in the tropics.

Examination of Tissues After Intravenous Inoculations of Staphylococcus Aureus and India Ink.—Dudgeon and Goadby studied the tissue reactions in rabbits from intravenous injections of *Staphylococcus aureus* alive and dead, and massive doses of india ink. Any particles injected into the circulation cause the accumulation of polymorphs in the lung capillaries. Inert colloidal particles such as india ink are clumped in the capillaries of the lungs, liver, spleen and kidneys and are phagocytosed by the endothelial cells. Staphylococci, alive or dead, are nearly all held up in the lungs, where they are actively phagocytosed by the polymorphs within five minutes of an intravenous injection. Subsequently the cocci are distributed to the other organs, where phagocytosis continues mainly by polymorphs, but in the liver also by the Kupffer cells. Especial attention is drawn to the localization of the cocci in certain areas in the kidneys. Platelet counting on animals injected with various substances showed that there is an agglomeration of the particles with the platelets, which are consequently removed from the circulation. In the case of the inert particles, the platelets are then restored to the circulation. With staphylococci some of the platelets appear to be completely removed from the blood together with the bacteria.

Journal of State Medicine, London

39: 187-248 (April) 1931

*Use of Pneumococcus Vaccine in Treatment of Cases of Lobar Pneumonia. W. H. Park.—p. 187.
Prevention of Disorders and Disease in Tropical Countries. D. B. Blacklock.—p. 204.
International Factory Clinic. A. Rollier.—p. 219.
Has Navy any Ophthalmic Sequelae? F. C. B. Gittings.—p. 230.
Medical and Hygienic Conditions in Frankfurt. W. Hanauer.—p. 236.

Pneumococcus Vaccine in Treatment of Lobar Pneumonia.—Park states that the previously unclassified pneumococci forming group IV have been largely classified. Twenty-seven additional specific types, all of which appear to be as stable as types I, II and III, have been separated and preserved. Only a few of these types appear in an appreciable percentage of the cases of pneumonia. Several of these newly classified types are especially prevalent in the pneumonias of children. The number of types creates a great difficulty in estimating the therapeutic effect of the specific antibodies. The refining of antipneumococcic serum can now be successfully done. Although it doubles the cost of the serum, the refined antibody solution has from five to ten times the potency of the original serum. The dose of antipneumococcic serum should always be estimated in units just as is the case with diphtheria antitoxin. The unrefined serum has two great disadvantages; namely, the large quantity of serum required to give a sufficient dose of units and the serum sickness which is so apt to follow its administration. The therapeutic effect of type I serum when administered to pneumonia patients with type I infection is excellent. The result of the use of type II serum is good but not so striking, and with type III it is doubtful. The results following the use of the specific serum in pneumonias due to some of the newly classified types appear to be favorable. The patients treated are too few, however, to give grounds for final judgment. The earlier patients with pneumonia receive the specific serum, the better will be the results. The proper dose of type I serum is, according to the severity of the case, from 50,000 to 100,000 units during the first twenty-four hours, and of type II cases from 100,000 to 200,000; according to the effect, similar or smaller doses are given during the second day. Unless favorable results are obtained within forty-eight hours, further doses of serum will probably be unavailing. The most strikingly good results are observed in cases of bacteremia. The Sabin microscopic method of typing pneumococci is of great value. It allows of a quick determination and requires only a moderate amount of sputum. The use of a vaccine composed of dead pneumococci as a prevention seems to be somewhat effective as a preventive against infection from the types that compose the vaccine. The great number of specific types of pneumococci is an impediment to the use of the vaccine. The therapeutic effect of a vaccine composed of several types of pneumococci and of other respiratory bacteria in the treatment of cases was not appreciable.

Journal of Tropical Medicine & Hygiene, London

34: 93-104 (April 1) 1931

Dawn of Tropical Medicine. P. Manson-Bahr.—p. 93.
Tropical Diseases Observed at Vichy. U. Boucher.—p. 97.

Lancet, London

1: 737-788 (April 4) 1931

*Study of Symptoms. J. A. Ryle.—p. 737.
*Transplantation of Teratomatous Ovarian Tumor in Fowl: Production of Sex Hormone by Cells of Transplants. S. L. Baker.—p. 742.
*Induction of Abortion. Margaret Salmond.—p. 745.
*Intensive Serum Treatment of Cerebrospinal Fever. H. S. Banks.—p. 747.
*Boils and Carbuncles Among Miners. S. W. Fisher.—p. 750.

Study of Symptoms.—Ryle briefly reviews the methods employed in the investigation of three symptoms; namely, abdominal pain originating in the colon, nausea, and the sense of dying. In the case of the particular pain of spastic colon the method was first to define the symptom itself by estimating its degree and discovering the special qualities peculiar to it, and then to review carefully its associations in the shape of other symptoms, physique, temperament and objective changes. In the case of nausea, a familiar symptom but one lacking the precision of pain, the method was to consider common experience, the physiologic and pathologic provocatives of the symptom, the various disorders in which it is prominent, and the factors common to these. Finally, the help of certain objective studies of the stomach by roentgen rays was obtained during attacks of natural and induced nausea. In the case of angor animi, or the sense of dying, the method was again to consider the known conditions in which it occurs, to record and correlate associated phenomena in each of these, to advance the hypothesis that the symptom could best be explained as being due to some disturbance involving the neighborhood of the vagal nuclei, the realm that governs the functions of life itself, and then finally to discover that organic disease in that confined region is in fact capable of reproducing the symptom.

Transplantation of Ovarian Tumor in Fowl.—Baker succeeded in transplanting a teratomatous tumor of the fowl's ovary to the first generation of hosts. The predominating cells in the original tumor and in the transplants resembled those in the theca interna of the ovarian follicles, lipoid-containing cells being a prominent feature. In addition, there were sparsely scattered groups of columnar-celled tubules and keratinizing epithelial masses. The original tumor-bearing fowl showed a fully developed oviduct but an undeveloped immature ovary. Young birds bearing tumor transplants showed a precocious development of the oviduct, the cloacal orifice of which became perforate. The ovaries of these birds remained immature.

Induction of Abortion.—Salmond states that a problem of great importance that must always be kept in the mind of the obstetrician who undertakes the operation of induction of abortion is the possibility and advisability of future pregnancies. In especially selected cases, for a cogent reason (cases in which a future pregnancy may be contemplated with hope of a successful conclusion) it is a justifiable operation. In many cases the induction of abortion is highly unsatisfactory. If possible, in this type of case, some safe method of preventing further pregnancy is more desirable. The only completely safe method involves sterilization of the patient by operation, roentgen rays or radium therapy being occasionally unreliable. Sterilization will not always be accepted by patients. Induction of abortion alone will remain as a method of treatment in a certain number of "undesirable" cases. In this type of case, medical advice with regard to contraceptive methods may be of value after the operation. The relative merits of (1) induction of abortion alone, (2) induction of abortion followed by some suitable method of sterilization, (3) cesarean section and sterilization (in those cases in which the condition would permit of the continuance of the pregnancy nearly or quite to full term) must be considered seriously in all cases.

Intensive Serum Treatment of Cerebrospinal Fever.—Banks suggests that when it is impossible to determine the type of infecting meningococcus and to apply the specific univalent serum, the available multivalent serum, which is weakly specific, should be injected in large doses of 100 to 200 cc., preferably intravenously, and, if that is impossible, intraperitoneally, in addition to the usual treatment. In a small series of cases with unfavorable age-grouping and generally coming under treatment at a fairly late stage, the mortality was 37.5 per cent. This mortality compares favorably with that reported in similar series in recent years. A peculiar feature is that rarely has any immediate serum reaction followed intravenous injection of these large doses of serum in this group of cases, with the exception of one case in which subsequent injections were given more than ten days after the first. As a rule, patients became quieter after the injection, and color was, on a few occasions, rather poor for an hour or so. Not a single rigor occurred. It seems amazing how well these large doses of intravenous serum are tolerated in this disease as compared, for example, with diphtheria. Serum rashes occurred in every case but gave no trouble.

Boils and Carbuncles Among Miners.—Fisher believes that, as far as mines are concerned, boils do not present a serious problem, except in a few isolated cases, and that the main factor in the causation of boils underground is a high wet bulb temperature, which at one and the same time indicates suitable conditions (warmth and moisture) for the vitality of the organism and opens the sweat glands and hair follicles and thus facilitates the entry of the staphylococcus.

Medical Journal of Australia, Sydney

1: 335-364 (March 21) 1931

Hypertrophic Response to Radium Irradiation: Preliminary Communication. D. L. Goulston.—p. 335.
Head Injuries at Birth. K. Christie.—p. 336.
*Periarterial Sympathectomy: Its Use in Ulcers, Gangrene and Other Conditions: Etiology of Trophic Changes. A. E. Coates.—p. 339.

1: 365-394 (March 28) 1931

Notes on Neurosurgery. L. C. E. Lindon.—p. 365.
Ophthalmologic Aspects of Psychiatry. S. Ellery.—p. 368.
Excretion of Lead in Urine After Injection of Colloidal Lead Orthophosphate. R. K. Newman.—p. 373.
Treatment of Deafness by Zündburguet Electrophonoide Method: Forty Cases. R. G. Brown.—p. 375.

Periarterial Sympathectomy.—To determine the value of the operation of "periarterial sympathectomy," Coates reviews a series of twenty-two cases. Beneficial results were obtained in cases of incipient gangrene, ulcer of the leg of the nonvaricose type, and ischemic contracture. Only temporary benefit was obtained in a case of Raynaud's disease. Little, if any, improvement was observed in cases of peripheral neuritis. Definite evidence is available that healing is accelerated and that as a preliminary to skin grafting improved results will be obtained. The effect of the operation is not lasting, a few months at the most being the maximum period during which arterial hyperemia is present in most instances. The presence of sensory nerves on blood vessels is discussed, and the opinion formed is that the operation interferes with vasoconstriction in the tunica adventitia of the artery, allowing a preponderating influence of reflex vasodilatation through axon reflexes.

South Africa M. Assn. Journal, Cape Town

5: 169-208 (March 28) 1931

Myths and Maps. E. G. D. Drury.—p. 173.
Review of Medical Practice at the Cape for Last Twenty Years (1910-1930). P. M. Daneel.—p. 179.
Along and Across America. J. H. H. Pirie.—p. 183.
Lighting and Optical Conditions of Operating Theaters. E. F. A. Sthamer.—p. 187.

Tubercle, London

12: 289-336 (April) 1931

*Stereoscopy of Roentgen-Ray Shadows. L. B. Stott and D. B. Cruickshank.—p. 289.
Case of Coronary Thrombosis. W. G. I. Paterson.—p. 293.

Stereoscopy of Roentgen Shadows.—In view of the widespread discussion as to the value of the application of the principle of stereoscopy to the examination of roentgen films, Stott and Cruickshank outline certain optical mechanisms involved in the appreciation of solidity. From their study they conclude that until one can be certain of obtaining a dextrograph and levograph taken at the same instant of time, or taken at precisely similar phases of the cardiorespiratory rhythm, one starts a stereoscopic investigation with false premises and the deduction of spacial arrangement is automatically vitiated. At the moment, lateral screening would appear to have most of the advantages and few of the disadvantages of the stereoscopic method.

Bull. et Mém. de la Soc. Méd. des Hôpitaux de Paris

47: 415-450 (March 23) 1931

*Effects of Surgical Intervention on Asthma. Pasteur Vallery-Radot, P. Blamoutier and F. Claude.—p. 416.
Pneumolith: Case. L. de Gennes and A. Tzanck.—p. 420.
Pulmonary Sclerosis as Consequence of a Foreign Body in a Bronchus for Five Years with a Secondary Tuberculosis. A. Lemierre and R. Cattan.—p. 421.

Effects of Surgical Intervention on Asthma.—On the basis of seventeen cases, Pasteur Vallery-Radot and collaborators show that surgical intervention has some beneficial action on the occurrence of asthmatic attacks. In many instances the attacks disappear entirely for a variable period of time. Contrary to this, in a few exceptional cases and in individuals who are markedly predisposed to asthma the attacks recur.

Bulletins et Mém. de la Soc. Nat. de Chirurgie, Paris

57: 397-422 (March 21) 1931

Spermatic Cord Gangrene from Hernial Truss Pressure: Case. Jullien.—p. 398.
Surgical Treatment of Angina Pectoris. R. Leriche.—p. 400.
*Pressor Reflex Suppression in Surgical Treatment of Angina Pectoris: Thirty-Three Cases. D. Daniélopolu.—p. 408.

Surgical Treatment of Angina Pectoris: Thirty-Three Cases.—On his extensive studies and experimental work with the aim to prove the possibility of surgical treatment of angina pectoris, Daniélopolu arrived at most encouraging views using his method of suppressing the pressor reflex. He stresses two main points in this procedure: 1. Touch neither the trunk of the vagus nor the nerves through which the sympathetic fibers of the myocardium and coronary arteries pass. 2. Try to divide as many afferent fibers as possible. The experimenter who will not follow these two principles may obtain incomplete results.

Presse Médicale, Paris

39: 417-432 (March 21) 1931

Arthroses. F. Coste and J. Lacapère.—p. 417.
*Cholecystectomy: Its Minor Accidents. L. van der Elst and M. de Langre.—p. 418.

Cholecystectomy: Its Minor Accidents.—Among numerous minor accidents of cholecystectomy, van der Elst and de Langre recognize, as the most important, hemorrhages, bile flow, icterus and postoperative stenoses. The authors point out the high importance of early recognition of the source of a hemorrhage on account of the great differences in its significance (mostly from the bed of the liver or the cystic artery). The former is seldom profuse and in general it stops spontaneously in a short time, while bleeding from the cystic artery is at times grave. In arresting the so-called late hemorrhages of cholecystectomy the only difficulty is the already formed adhesions, which make the reintervention much more complicated. The authors highly advocate thorough preoperative blood tests (coagulation time test and others). Postoperative bile flow is generally benign. If profuse, it is due in the majority of the cases to a slipping off of the ligature from the cystic duct and exceptionally comes from the common bile duct. Usually it stops spontaneously. Early postoperative icterus is always transitory. If it persists the surgeon must decide: Is it produced by liver deficiency, is it just a minor accident of compression or is it provoked by an injury to the common bile duct during the operation? In many instances it is produced not only by the causes mentioned but at times also by a stone left in the common bile duct. A slight icteric tint may appear on the next day after operation. In a day or two it becomes more marked. The authors suggest that the drain be replaced or slightly pulled out, whereupon this symptom will quickly disappear with its accompanying malaise. Icterus provoked by the abscess formation at the operative zone and the simultaneous opening of the wound in the abdominal wall or icterus due to pancreatitis are the other serious complications of this operative procedure. The authors repeatedly emphasize the importance of a thorough preoperative as well as postoperative exploration of the abdomen. They definitely point out that of all the causes of icterus liver deficiency is probably the most frequent. In postoperative stenosis (mostly pyloric and duodenal) subhepatic plastic peritonitis plays a great part. It is just sufficient to replace or elevate the drain and see that the incident ceases. Thorough exploration of the ductus choledochus, gallbladder and pancreas is the main requisite before any surgical steps are undertaken. If one has doubt as to the integrity of the common bile duct, one should not hesitate to perform a choledochotomy before attempting anything else. The authors reveal some detailed but nevertheless important minor technical points, particularly emphasizing the necessity of placing separate ligatures on the cystic duct and on the cystic artery. Among some of their highly recommended suggestions is always to close the peritoneum with the great omentum fixed to the inferior border of the parietal peritoneum. At the conclusion they stress once more the importance of proper drainage, which is next in importance to a skilfully done cholecystectomy, and the value of combined cigaret drain and rubber drain. The latter facilitate hemostasis and isolate the operative zone.

39: 433-448 (March 25) 1931

Bitters: Their General Effects. M. Loeper and A. Lemaire.—p. 433.
*Bacillus Tuberculosis in Circulating Blood in Pulmonary Tuberculosis. J. Caussimon.—p. 435.

Bacillus Tuberculosis in the Blood in Pulmonary Tuberculosis.—Caussimon, contrary to the ways of most of his French predecessors, did research work on tuberculous bacillemia by the direct method, alining himself with the works of the German students, by whom this question is much discussed at present. He agrees, of course, with most of the investigators that the direct method for this kind of laboratory work is really highly difficult and even hazardous. Among other objections to this method is the proportion of positive results, which in chronic pulmonary tuberculosis are not over 30 per cent. The author agrees that blood bacterioscopy is difficult. The principle of his method is as follows: A tubercle bacillus suspension is prepared with rabbit's blood as much diluted as possible, so the percentage should be very low. Then the investigators examine samples of such blood for tubercle bacilli by means of well known procedures. The concentration of the weakest solution in which the results for tubercle bacilli were negative gave the investigator the degree of sensibility of each experiment performed. For more complete and reliable results it is always better to have as many of those examinations as possible. To make the solutions more suitable for his experiments the author utilized dead B C G cultures. With different processes of blood chemistry the author after elaborate work comes to the following conclusions: He proves that the tubercle bacillemias are not of much distinction from other forms of bacillemia. All together, the direct method of research gives positive results in 30 per cent of all cases studied. So tuberculous bacillemia is of relative importance. Furthermore, it is possible and probable that in the course of pulmonary tuberculosis more discrete bacillemias are produced which escape the imperfect technic and which bring on unimportant pathologic changes. The author's observations are therefore in direct contradictions to the investigations of Schottmüller and others.

Revue Française de Pédiatrie, Paris

7: 1-120, 1931

Blood Transfusion in Nurslings: Technic and Indications. E. Lesné and G. Dreyfus-Sée.—p. 1.
*Gangrenous Tonsillitis in Scarlet Fever: Treatment with Antigangrenous Serum. A. Stroe, D. Hortopan and J. Bazgan.—p. 23.
Intestinal Obstruction in Nurslings. J. J. Bindschedler and B. Tassovatz.—p. 44.
Possibility of Biologic Treatment in Acute Anterior Poliomyelitis. C. T. Umana.—p. 64.
Trichocephalus Dispar in Infants: Its Expulsion with Acetarsone. A. Levine.—p. 76.
Phosphoremia in Nurslings and Infants. A. Vallette and R. Dubois.—p. 84.

Gangrenous Tonsillitis in Scarlet Fever: Treatment with Antigangrenous Serum.—Stroe and collaborators compare their results in fifteen cases of gangrenous tonsillitis in scarlet fever with the observations of many other French writers and conclude with a favorable comment on the use of an antigangrenous serum in those cases. Their experiences for the years 1928-1929 show that the proportion of mortality of cases encountered was over 75 per cent, while in 1930 with the extensive employment of antigangrenous polyvalent serum the mortality fell to from 6 to 13 per cent. The latter figure is for the complicated cases. It is well to remember that in 1930 there was in Roumania a most grave epidemic of scarlet fever.

Revue d'Orthopedie, etc., Paris

18: 105-200 (March) 1931

*Pellegrini-Stieda Disease. R. Pétrignani.—p. 105.
Congenital Hip Subluxation in Young Children. Charier.—p. 118.
Treatment of Coxalgia by Ankylosing Operations: Case. G. Phocas and T. Garophalides.—p. 130.
Fracture of Five Transverse Lumbar Apophyses: Sacrolumbar Separation: Case. P. Corret.—p. 135.
Spontaneous Rupture of Achilles Tendon: Case. A. Aimes.—p. 139.
Rheumatic Lumbo-Arthritis: Case. Saves.—p. 141.
Habitual Trapezometacarpal Dislocation. Pervès and Barrat.—p. 143.

Pellegrini-Stieda Disease.—Pétrignani characterizes this injury as an osseous neoformation of the internal condyle of the femur, easily visible on the roentgenogram. The disease is known also under the name of Stieda's fracture as well as under many other names. The author reviews its etiology, pathology, pathologic anatomy, diagnosis, differential diagnosis, prognosis and modes of treatment.

Archivio Italiano di Urologia, Bologna

7: 347-446 (March) 1931

So-Called Ureteral Exclusion in Tuberculosis of Kidney. R. Scalabrino.—p. 347.
*Antibacterial and Bactericidal Action of Methylthionine Chloride in Normal and Pathologic Urines. G. Olivieri.—p. 385.
Hydronephrosis Due to an Anomalous Vein, with Complete Obliteration of Renal Artery and Ureter. O. Amorosi.—p. 402.
Treatment of Rupture of Posterior Urethra, Complicated by Fracture of Pelvis. C. Calef.—p. 416.

Bactericidal Action of Methylthionine Chloride in Urine.—Olivieri concludes from his researches that methylthionine chloride employed in urine in the usual concentration of 1 per cent does not constitute the therapeutic optimum (at least not from the parasiticidal point of view) in cystitis in general and probably not in tuberculous cystitis. In the concentration cited, only certain species of pathogenic micro-organisms are destroyed (in the author's researches *Bacillus coli, Bacterium paratyphosum* A and *Staphylococcus pyogenes-citreus*), whereas others are not only not killed but instead of being checked in their development appear to be invigorated by the presence of the dye, which appears to be an element favorable to their existence. Although the author's researches did not extend to the tubercle bacillus, the mere fact that its resistance is greater than that of the micro-organisms cited leads to the assumption, by analogy, that also the tubercle bacillus is in a position to take advantage of the presence of the coloring substance. This favorable action can be explained, in all probability, in two ways: either by the bringing of respiratory oxygen to the bacterial body by the methylthionine chloride or by the neutralization (through transformation into leukobase of products of bacterial exchange) of the blue present in solution and the consequent lowering of the active concentration of that substance in anaerobic surroundings, as are found in the bladder.

Clinica Chirurgica, Milan

34: 113-248 (Feb.) 1931

Doubtful Diagnosis in Appendicitis. P. Cazzamali.—p. 113.
*Late Vicious Circle After Vertical Posterior Gastro-Enterostomy. T. Biancheri.—p. 196.
Hepatic Function in Relation to Acid-Base Equilibrium in Normal Conditions and in General Anesthesia. S. Cimino.—p. 207.

Late Vicious Circle After Vertical Posterior Gastro-Enterostomy.—Biancheri reports the case of a man, aged 43, tall, with abdominal ptosis and gastric distention, who was operated on for mesogastric ulcer under ether narcosis, transmesocolic vertical posterior gastro-enterostomy with a short loop being performed. After eight days of a regular course, a vicious circle developed through the formation of a false fold in the region of the anastomotic opening. An anterior gastro-enterostomy and later a jejunal fistula brought no improvement and the patient died on the twentieth day. The author brings out: (1) the significance of the shortness of the loop, in relation to the distance from the point in the stomach to which it was attached, for the pathogenesis of the observed complication; (2) the fact that the depth of the filling defect was due not only to the degeneration of the tissues but also to the spastic contraction of the margins of the ulcer, and (3) the curative effect of the gastro-enterostomy on the gastric ulcer, which was distant from the pylorus.

Riforma Medica, Naples

46: 1857-1896 (Nov. 24) 1930

*Lipoid Nephrosis. F. Galdi and C. Cassano.—p. 1859.
Determinations of Hydrogen Ion Concentration of Blood in Skin Diseases. M. Bronzini.—p. 1864.
*Association of Periarterial and Perineural Sympathectomy in Angiotrophic Disturbances. C. Bertone.—p. 1866.

Lipoid Nephrosis.—Galdi and Cassano propose the name of lipuric diabetes as a new denomination for the condition hitherto known as lipoid nephrosis. After describing the clinical picture of lipoid nephrosis and reviewing the several theories advanced to explain its etiology and pathogenesis, the authors state that the disease is caused by a disequilibrium of the fat metabolism, rather than by the alterations of the kidneys, which play a secondary rôle. The examination of the blood and the urine of patients with lipoid nephrosis indicates faulty functions of fixation, elaboration and combustion of the fats. The disturbances in the fat metabolism are reflected in the metabolisms of carbohydrates and proteins, as well as in an imbalance of the colloids, pointing out the close relations between the different types of metabolism in the organism. The authors believe that the term lipoid nephrosis should be restricted to designate kidney diseases not associated with metabolic disturbances and in which the chemical changes of the blood are related with the lesion of the kidneys. Mixed forms of nephrosis with subacute or chronic processes of glomerulonephritis should be included in this group. For those forms of nephrosis characterized by hyperlipemia and lipuria and in which the predominant factor is the disequilibrium of the fat metabolism, the renal factor playing a secondary rôle, the name lipuric diabetes seems to be more descriptive for the condition than the name lipoid nephrosis is. Further studies of the disease, with especial reference to the fat and carbohydrate metabolisms, in relation to the nosographic differentiation of the forms of nephrosis mentioned are advised.

Periarterial and Perineural Sympathectomy in Angiotrophic Disturbances.—In the treatment of angiotrophic disturbances, Bertone advises the association of periarterial and perineural sympathectomy. The former alone is not enough to obtain satisfactory results. The latter alone is not so efficient as periarterial sympathectomy; still, when in association with periarterial sympathectomy, perineural sympathectomy is of practical value because by performing it a large number of sympathetic fibrils are eliminated from the wall of an artery. A case is reported in which the patient, as late sequelae of an accident (congelation in three fingers of his right hand) had angiotrophic disturbances and diminished capacity to work. The patient had received treatment immediately after the accident and some parts of his fingers were amputated. Periarterial sympathectomy in association with resection of the perineural sheath of the median nerve gave good results in this case.

47: 241-280 (Feb. 16) 1931

Chronic Myelogenous Leukemia: Sulphur Treatment: Two Cases. G. Izar.—p. 243.
Modifications of Blood in Relation to Variations of Blood Sugar: Mechanism of Hypoglycemia. L. Jacchia.—p. 247.
*Immunization Therapy in Tumors: Inoculation of Cancer Patients with Ultrapeptones of Cancer to Act as Antibodies. F. Figari.—p. 250.
*Actinomycosis of Tonsillar Origin Caused by Industrial Accident. F. Allodi.—p. 254.

Immunization Therapy in Tumors.—Figari says that the condition of immunity to the inoculation of cancer tissue, which cancer patients exhibit, may be explained on the grounds of a theory by which the toxic proteins derived from the tumor control the activities of the organism to disintegrate proteins, thus avoiding that other proteins introduced in the organism may be disintegrated. When the proteins are previously disintegrated, however, the organism may set free their essential specific constituents. For early diagnosis of cancer the use of an enzyme reaction, in which the disintegrated products of cancer tumors were used as an antigen (after having passed through a process of hydrolysis by which only the last stage of disintegration from polypeptides into amino-acids remained to be done), gave good results. The results positive for cancer with this enzyme reaction were more marked in patients in whom the cancer formation was recent than in those with cancer of long duration. The results positive for cancer with this enzyme reaction led to the treatment of cancer by ultrapeptones

from neoplastic tissues, derived from several types of tumors which were disintegrated until they were brought to a condition of ultrapeptones. By means of the inoculation with ultrapeptones of cancer, cutaneous epithelioma and neoplasms of the stomach, of the breast and of the uterus were treated. The cutaneous epithelioma showed a constant improvement till recovery in a period varying from one to three months. In one of these cases a biopsy was made and the microscopic observations showed that the neoplastic cells were in a stage of retrogression and that connective tissue was developing abundantly around the neoplastic tissue. The clinical evolution of the internal tumors indicated also a similar curative effect of the treatment. The author says that the inoculation with ultrapeptones of neoplastic tissues increases the production of the specific ferments of defense (which exist in the blood of cancer patients) to act as antibodies, and stimulates the production of growth-preventing substances which are antagonistic for the type of tumor from which they are originally derived. The results obtained with ultrapeptones of cancer in the treatment of cancer indicate, the author believes, the possible therapeutic value of the treatment.

Actinomycosis of Tonsillar Origin.—Allodi reports an unusual case in a farmer, aged 30, who was working with a threshing machine when it suddenly stopped. He came near the machine to see what was wrong when suddenly the machine began to work again, blowing dusty particles of oats into his mouth. Shortly after the accident the farmer developed an acute attack of supposed diphtheria, which disappeared spontaneously after some days, leaving a chronic tonsillar actinomycosis with diminished ability to work. When the patient was seen four years after the accident he had infected tonsils (which were removed), chronic pharyngitis and a fistula of long duration behind the right tonsil, which probably developed during the first acute attack. The case is considered under the point of view of industrial diseases which give workmen right to compensation. The author states that in cases of this nature actinomycosis should be considered as any other infection with right to compensation and that, at the evaluation of the injury of the laborer, among late sequelae of tonsillar actinomycosis the formation of abscess of the lung or of gangrene of the lungs which may cause fatal complications should be borne in mind.

Prensa Médica Argentina, Buenos Aires

17: 1339-1382 (Feb. 28) 1931

*Acute Pulmonary Edema as Complication of Mitral Stenosis of Rheumatismal Origin. M. R. Castex, C. A. Llambías and E. S. Mazzei.—p. 1339.
Tubero-Infundibulo-Pituitary Syndromes: Pathogenesis. A. F. Camauër.—p. 1344.
Spontaneous Infection of Armadillo with Trypanosoma Cruzi in Some Provinces of Argentina. S. Mazza, C. Romaña and K. Schürmann.—p. 1350.
Influence of Cardiac Decompensation and of Angina Pectoris on Sugar Tolerance of Diabetic Patients. G. Schultz Ortiz and J. A. Pangaro.—p. 1357.

Acute Pulmonary Edema in Mitral Stenosis.—Castex and collaborators state that the several theories which appear in the literature on the etiology and pathogenesis of acute pulmonary edema as a complication of mitral stenosis are contradictory. Acute pulmonary edema develops in grave myocardial attacks of a rheumatismal origin in heart diseases characterized by an association of valvular lesions of the aortic and mitral valves and in contractile insufficiency of the auricle. It has been believed that the attacks are brought on by the following determining factors: the sudden dilatation of the auricle caused by exertion; the dilatation of the auricle or of the ventricle caused by the presence of progressive chronic rheumatic fever; the association of myocardial and pericardial lesions, and the alteration of the reflexes of the sympathetic nervous system. These factors may be present either alone or in association. Acute pulmonary edema is a rare complication of mitral stenosis. In its development the presence of myocardial lesions of a rheumatismal origin play the essential rôle. A case that occurred during an attack of nodular myocarditis of rheumatismal origin, associated with pericarditis, is reported. The patient, aged 17, had had chronic rheumatism for ten years with three recidivations, the last of which preceded by a few days the cardiac failure, which at first was manifested by moderate symptoms (edema of the ankles which disappeared when the patient was at rest), and which later developed into the grave attack of acute claudication of the left heart. The authors interpret their case as the result of a valvular lesion with a type of mitral stenosis which was proved at necropsy and which they believe was caused by the chronic progressive rheumatic fever.

Deutsches Archiv für klinische Medizin, Berlin

170: 1-250 (March 2) 1931

Protein Metabolism in Leukemias Studied During Minimum Nitrogen Diet. A. M. Brogsitter and A. Schmidt-Ott.—p. 1.
Size of Heart and Cardiac Function. R. Sturm.—p. 24.
*Influence of Spleen Substances on Gastric Secretion. E. Schliephake and R. Kronsohn.—p. 38.
Diagnosis of Pancreatic Disorders. F. Delhougne.—p. 51.
Course and Prognosis of "Genuine Nephroses." G. Schreyögg.—p. 58.
Examination of Blood by Means of Spectral Photometer. P. Martini, G. Loewe, Jonkow, B. Schuler and O. Stützel.—p. 72.
*Disturbance of Heat Regulation in Diseases of Midbrain. S. Molnár and S. Weber.—p. 91.
Incidence and Severity of Hyperthyroidism Increased During Summer Months. O. Hirsch.—p. 96.
Aspects of So-Called Agranulocytosis. H. Fuld.—p. 100.
Sugar Content of Blood and Muscular Exertion in Normal and in Obese Persons. M. Wollmer.—p. 122.
Endemic Ostearthritis. W. G. Schipatschoff.—p. 133.
Cardiac Infarct and Pericarditis Epistenocardica. A. Hallermann.—p. 146.
Diminution or Cessation of Vocal Fremitus or of Respiratory Murmur in Pleural Effusion and in Pneumothorax. G. Roesler.—p. 150.
Painful Anacidic Corpus Gastritis. W. Kuckuck.—p. 156.
*Significance of Galactose Test in Examination of Function of Liver. O. B. Bode.—p. 165.
Blood-Cerebrospinal Fluid Barrier and Bilirubin in Icterus. U. de Castro.—p. 176.
Skin Reaction After and General Action of Hydrogen Sulphide Baths in Mazesta (Caucasus). J. Oettinger and M. Rabinowitsch.—p. 188.
Injections of Invert Sugar and of Cane Sugar in Diabetes Mellitus: Influence on Content in Ketone Bodies. O. Pucsko.—p. 203.
Development of Perpetual Arrhythmia. K. Fahrenkamp.—p. 231.

Influence of Spleen Substances on Gastric Secretion.—Schliephake and Kronsohn examined the secretion of the stomach before and after administration of spleen. They employed fractional withdrawal of the gastric contents after Ehrmann's alcohol test drink. The spleen was administered either fresh or in the form of extracts. The spleen extracts were injected in some persons forty-five minutes before the alcohol test drink was taken, in others thirty minutes before, in a third group immediately preceding the test drink and in a fourth group following withdrawal of the first portion of the gastric contents. The spleen extracts effected a retardation in the evacuation of the stomach. In persons with hyperacidity there was a retarded emptying and a decreased acidity during digestion and during the after-secretion; in those with subacidity there was a corresponding increase; and in those with normal acidity the reactions were somewhat uncertain, yet in most instances there was an increased acidity but a decreased quantity of the juice of the fasting stomach. In oral administration of the spleen substances the conditions are somewhat distorted. However, on the whole the results are about the same. In a consideration of the outcome of these experiments it seems at first surprising that they contradict the former theories, which assumed a stimulation of the gastric secretion by spleen substances, whereas these experiments revealed in most cases a retardation in the evacuation. However, this can be explained by the high choline content of the preparations that were used in former tests. Other contradictory results of former investigators are discussed. The authors conclude that the spleen substances, by way of the sympathetic nervous system, exert a regulatory influence on the acid production of the stomach and that in the motility they also probably effect certain changes.

Disturbance of Heat Regulation in Diseases of Midbrain.—Molnár and Weber point out that in patients in whom the midbrain or its immediate surroundings are diseased there often exist disturbances in the heat regulation. In some conditions subnormal temperatures have been observed, whereas in others cephalic hyperpyrexia has been noted. The authors describe tests to which they subjected twenty-four persons. Seven of them were normal, but in the other seventeen disorders existed which made the involvement of the midbrain probable. After the rectal temperature had been taken they were put for thirty minutes into the hot air chamber while

the temperature in the chamber was gradually increased from 40 C. to 60 C. Then the rectal temperature was again measured and it was found that in normal persons the increase never exceeded 0.5 degree C. In twelve of the seventeen patients, however, the heat regulation showed a disturbance in that the temperature increase was considerably above that of normal persons. The authors state that the heat regulation in such patients is similar to that in poikilothermic cold-blooded animals. In several cases it was also possible to detect other symptoms that indicate a disturbance in the midbrain, such as polyuria, retarded blood sugar curve, hypophyseal adiposity and abnormalities in the basal metabolism.

Galactose Test in Examination of Function of Liver.—Bode investigated the significance of the galactose tolerance test in the examination of the functional capacity of the liver. Blood sugar curves were made, and an increase of 30 mg. per hundred cubic centimeters was considered as pathologic. The urine was examined in order to detect excretion of galactose. 1. In acute injuries of the parenchyma of the liver there exist pathologic blood sugar curves and marked galactosuria. Repeated tests in the same patient show restoration of the normal function of the liver. 2. Patients with cirrhosis of the liver show the greatest increase in the blood sugar but nc galactosuria. This is thought to be due to the increased renal threshold for galactose, in the only gradually developing liver disease. 3. Cases of ascites in which the pathogenesis is not known do not show this pathologic galactose curve and thus a liver cirrhosis may be excluded. 4. In cases of icterus due to obstruction by calculi there are, if the jaundice has existed for a longer period, increased blood sugar curves and also galactosuria. If the test is made immediately after the attack, however, the result may be negative. 5. In icterus resulting from compression of the choledochus the blood sugar curve is pathologic but the galactosuria is not considerable. This is significant in the differentiation from icterus of hepatocellular genesis, in which besides the increased blood sugar content there is also a considerable galactosuria. 6. In localized diseases of the liver, for instance in tumor metastases, the outcome of the test is dependent on the degree of destruction of the liver tissues. 7. In decompensated valvular lesions with engorged liver the galactose test indicates functional disturbances of the liver which go parallel with the severity of the decompensation. 8. Febrile disturbances give varying results. However, the outcome of the test frequently reflects the patient's general condition. 9. Comparative tolerance tests with galactose and with levulose show the superiority of the galactose test.

Deutsche Zeitschrift für Nervenheilkunde, Berlin

120: 111-224 (March 24) 1931

Ataxia and Functional Changes. V. von Weizsäcker.—p. 117.
*Aspects of Myasthenia Gravis. A. Reuter.—p. 131.
Significance of Blood Groups and of Intravenous or Intracutaneous Technic of Inoculation for Course of Fever in Malariotherapy. H. R. Müller.—p. 162.
*New Symptom in Bilateral Disorders of Brain Stem. L. Nemlicher, M. Schetzer and D. Schmelkin.—p. 184.
Neurologic and Roentgen Investigations on Peripheral Arteriosclerosis. G. D. Aronowitsch.—p. 191.

Aspects of Myasthenia Gravis.—Reuter reports the clinical histories of eleven patients with myasthenia gravis. In two patients, paresis of the muscles of the eyes was the most prominent symptom (ophthalmoplegic form of myasthenia). In nearly all patients the myasthenia concurred with endocrine disorders such as amenorrhea and hyperthyroidism. Although a causal relation between the dysfunctioning of the endocrine glands and the myasthenia could not be definitely demonstrated, the author considers such a relation possible. Because the essential nature of myasthenia is as yet not clearly understood, the author made tests to determine whether the muscle chemism of these patients was abnormal. Examination of the lactic acid content of the venous blood revealed no marked increase above the normal. After muscular exertion there was no abnormal increase in the lactic acid content. In two patients the calcium content was determined and an increase could not be detected. The basal metabolism was increased in one of the patients in whom the myasthenia was complicated by hyperthyroidism.

New Symptom in Bilateral Disorders of Brain Stem.—In two cases of amyotrophic lateral sclerosis with pseudobulbar manifestations and with pathologic bulbar reflexes, Nemlicher and collaborators observed a jerklike reflex movement of the head, following percussion of the medial bones of the face. This mediofacial reflex was noted likewise in pseudobulbar paralysis, in a case of hemiplegia in which the other side also had pyramidal manifestations, and in cases of parkinsonism with bilateral pyramidal disorders. However, in a number of patients with ordinary hemiplegia, or in unilateral or bilateral, extrapyramidal disorders, without pyramidal involvement, and in normal persons, this reflex was absent. Thus this phenomenon is pathognomonic for disorders high up in the pyramidal tracts. It is a periosteal reflex, the optimal receptor zone of which is the middle portion of the alveolar process of the superior maxilla. The reflex arc must be formed by the fibers that go from the descending trigeminus roots to the cervical muscle nuclei in the upper cervical segments of the spinal medulla. The described (mediofacial or faciocervical) reflex thus takes a position between the pathologic bulbar reflexes and the spinal reflexes, and in some instances it may have diagnostic significance.

Jahrbuch für Kinderheilkunde, Berlin

131: 129-256 (April) 1931

*Feebleminded Nurslings: Motor and Respiratory Disturbances. A. Peiper.—p. 129.
*Scarlet Fever Immune Serum. E. Gabriel.—p. 148.
Breast Milk as Factor Influencing Development of Infant. S. A. Gil.—p. 198.
*Rachitic Cartilage: Calcification in Vitro. G. Meyer zu Hörste.—p. 203.
Pulmonary Tuberculosis: Erythrocyte Sedimentation Reaction. L. von Csöke.—p. 216.

Feebleminded Nurslings: Motor and Respiratory Disturbances.—According to Peiper, the brain injury of feebleminded nurslings frequently leads to hyperirritability of the motor centers and of the respiratory center. As a result of the hyperirritability of the motor centers there appear convulsions or their antecedent conditions; namely, hyperirritability as manifested clinically by spontaneous reflexes and twitchings of various muscles. The condition of irritability of the respiratory center is expressed in respiratory disturbances, which likewise appear spontaneously when the patient is resting and are frequently associated with motor disturbances. At the height of the convulsion the respiratory disturbance reaches its maximum because stimuli from the motor centers pass over to the respiratory center. Thus arises the picture of the constant irregularity in the respiration.

Scarlet Fever Immune Serum.—Gabriel presents a comparative study of the results obtained in the treatment of 611 scarlet fever patients with scarlet fever immune serum and 611 other scarlet fever patients without the serum. He noted that the much discussed "critical drop in temperature" occurred not only in the cases in which serum was used but also in the control cases. It cannot, therefore, be considered as a typical and characteristic action of the serum. In not a single case was the action of the serum conclusive. Because of the rarity of severe toxic cases during the observation period it was impossible to form a definite opinion concerning the antitoxic action of the serum. In the cases in which serum was administered, however, there were fewer complications.

Rachitic Cartilage: Calcification in Vitro.—Meyer zu Hörste studied the process of calcification of sheets of rachitic rat cartilage from 0.5 to 1 mm. thick in a solution containing 0.58 per cent sodium chloride, 0.03 per cent sodium bicarbonate, 0.019 per cent magnesium sulphate, 10 mg. of calcium chloride per hundred cubic centimeters and from 4 to 5 mg. of sodium phosphate per hundred cubic centimeters. The hydrogen ion concentration of the solution was adjusted with carbon dioxide to approximately 7.3. In order to prevent a loss of carbon dioxide the solution was covered with a layer of paraffin. It was noted that during the process of calcification the cartilage removed calcium and phosphorus from the solution in the ratio 1 : 1. The metabolism of calcifying normal epiphyseal cartilage was then studied and was found to be of the same type but less marked than the metabolism of rachitic cartilage. When the phosphorus content of the calcification solution was decreased, phosphorus passed from the tissue into the solution.

Klinische Wochenschrift, Berlin

10: 481-528 (March 14) 1931

Present Status of Bacterial Pleomorphism. E. Klieneberger.—p. 481.
*Circulation During Shock. G. Ganter and A. Schretzenmayr.—p. 484.
Experimental and Clinical Investigations on Oral Treatment of Diabetes: Bile Acids Facilitating Resorption of Insulin. E. Wahncau and F. Bertram.—p. 486.
Method of Production of Cutaneous Vesicles. H. Hahn and H. Taeger. —p. 489.
*Hypophyseal Antidiuresis. F. Lebermann.—p. 491.
Blood Sugar Curves and Determination of Diastase in Pancreatitis and in Parotitis. S. Hirschhorn, H. L. Popper and A. Selinger.—p. 493.
Differentiation of the Four Blood Group Phenotypes by Active Erythrocyte Anaphylaxis. T. Wohlfeil and H. Voswinckel.—p. 495.
Necessity of Qualitative Examination of Blood Proved by Observations in Tetanus and in Bronchial Asthma (Eosinophilia). Arneth.—p. 497.
Apparatus for Determining Urea in Small Quantities of Fluid. O. Schumm.—p. 501.
Experiences with Citochol (Sachs-Witebsky) Reaction in Serum and in Cerebrospinal Fluid. H. Kreuzer.—p. 502.

Processes in Circulation During Shock.—Ganter and Schretzenmayr point out that the main circulatory manifestation in shock is the decrease in blood pressure. Experimental studies of several investigators proved that the reinjection of protein or the administration of shock poisons such as histamine and peptone produce a considerable decrease in the blood pressure. The pathogenesis of this decrease in pressure was difficult to explain, because the perfusion experiments on surviving organs and partly also the results of plethysmography indicated a constricting action of histamine, peptone or the anaphylactic poison, and a constriction would be more likely to produce an increased than a decreased blood pressure. The authors studied the behavior of the vessels of the systemic circulation on decerebrate anesthetized dogs and cats, following administration of histamine or of peptone or in the anaphylactic condition resulting from horse serum. The experiments, which they conducted with a method perfected by Ganter, revealed that in dogs as well as in cats the injection of the shock poison is followed by a decrease in the tonus or by a dilatation of all arteries of the systemic circulation. The results of these experiments disprove the theories of other investigafors, who stated that the decreased blood pressure in shock conditions is the result of blockage of the lung or liver.

Hypophyseal Antidiuresis.—Lebermann defines "hypophyseal antidiuresis" as that manifestation wherein the injection of preparations of the posterior lobe of the hypophysis is followed by a urine blockage. The quantities of urine are extremely small but the specific gravity is high. The antidiuresis is followed by an increased renal secretion. The author found that in order to analyze the urine blockage it is advisable to combine the administration of the preparation of the posterior lobe of the hypophysis with the Volhard water test. He employed this procedure for the investigation of various problems. The question regarding the point of attack of the hypophyseal diuresis blockage, which is primarily of a theoretical interest, has not been completely solved as yet. In an investigation of the condition of the blood in the course of the hypophysis-water test, attention was also given to the exchange processes between blood and tissue fluid. It was found that these extrarenal processes are not at all or only slightly influenced by the hormone from the posterior lobe of the hypophysis. Observations that were made when, in addition to the hypophysis-water test, vasoconstrictor, vasodilator or diuretic medicaments were administered, indicated that the urinary blockage cannot be produced alone by the vasoconstrictor action of the hypophyseal hormones. Certain factors seem to speak for a renal point of attack of the diuresis blockage. The fact that the sex hormones intensify the hypophyseal antidiuresis is likewise of significance. Attempts have been made to utilize the hypophyseal antidiuresis for clinical purposes. Its therapeutic possibilities are utilized in diabetes insipidus, and because the antidiuresis indicates a considerable concentration capacity of the kidneys it appears reasonable to employ it in the diagnosis of the renal function. Experiments convinced the author that, although the preparation of the posterior lobe of the hypophysis cannot entirely replace the Volhard thirst test in the examination of the concentration capacity of the kidneys, it is nevertheless of considerable value in the estimation of cases of renal insufficiency in which the water test reveals hyposthenuria or isosthenuria.

Medizinische Klinik, Berlin

27: 453-490 (March 27) 1931

Problem of Personality Structure. J. Lange.—p. 453.
*Anatomic Organ Diseases from Psychic Causes. L. Alkan.—p. 457.
How to Proceed in Ulcer-Like Disorders Without Objective Changes. L. von Friedrich.—p. 464.
*Treatment of Insomnia. H. Uiberall.—p. 465.
Treatment of Paroxysmal Tachycardia. E. Drucker.—p. 468.
Intercurrent Infection in Congenital Syphilis. G. Lewin.—p. 470.
Early Sign of Arteriosclerosis. H. Gerhartz.—p. 471.
Act of Vomiting and Its Prevention. Bieling.—p. 471.

Anatomic Organ Diseases from Psychic Causes.—Alkan deplores that pathology still makes a sharp distinction between anatomic organ diseases and functional diseases, the psychoneuroses being included in the latter group. Observation reveals that every process in the body is accompanied or influenced by psychic processes and vice versa. The functions of the organism are dependent on psychic factors and the psyche in its manifestations is bound on the organism. The result of fluctuations in the psychic processes, especially in the emotions, are the neuroses. They are the diseases of the haste of modern life, the result of the restlessness of the successful and of the depression of those who fail. Many persons are equal to such stress, but the neurotic person cannot adjust himself. This lack of balance in the emotional sphere, which becomes manifest on the one hand in anxiety to despair, in envy, anger, horror and inhibition, on the other hand in restless haste, causes disordered functioning of one of the organs, and such disorders do not always remain functional and reversible, but gradually permanent anatomic changes may develop. The author discusses various functional and anatomic disorders that may result from neuroses. He discusses hypertension and other circulatory disorders, also disturbances of the gastro-intestinal tract, of the gallbladder, of the respiratory organs, of the endocrine apparatus, of the skin, of the sexual system, and of the metabolism. He shows that psychoneurology is significant in all branches of medicine.

Roentgen Irradiation Treatment of Insomnia.—Before reporting the results of his attempt to influence certain forms of agrypnia by roentgen irradiation of the basal portions of the brain, Uiberall discusses the types of agrypnia. He differentiates between the primary and secondary forms. The primary form is due to a disturbance in the sleeping mechanism of the brain, whereas in secondary agrypnia the cause lies outside the sleeping mechanism, in psychic factors, pain or external irritants. Roentgen therapy is successful only in the primary cases. Primary agrypnia may result from encephalitic processes, from toxic injuries of the sleep center in the course of generalized diseases, from hormonal disorders or from fixation of formerly existing secondary agrypnia. The author's method of treatment was roentgen irradiation of both temples and of the center of the forehead in order to reach the hypophysis. The single dose was about one third of the unit skin dose, which was varied in individual cases. It was applied through a filter of 0.5 mm. of zinc, with 170 kilovolts, at 30 cm. focus distance, and on a field measuring 6 by 6 cm. The three fields were irradiated at intervals of from two to four days. If necessary, a second series was applied from three to four weeks later. Among thirty patients treated in this manner there were nine patients with secondary agrypnia, and in none of these was the treatment effective. Of the twenty-one patients with primary agrypnia, ten were cured completely by the roentgen irradiations, four showed improvement, in three others the effect was uncertain and in four patients there was no effect whatever. From these results the author concludes that roentgen irradiation of the basal portions of the brain is a promising method for the treatment of primary insomnia.

Münchener medizinische Wochenschrift, Munich

78: 471-518 (March 20) 1931

*Bacillemia in Urogenital Tuberculosis. R. Lichtenstern.—p. 471.
Acute Articular Rheumatism and Tubercle Bacillemia. C. Reitter and E. Löwenstein.—p. 472.
Experiences with Causal Heart Hormone Therapy with Muscle Extract in Angina Pectoris and in Essential Hypertension. Korach.—p. 473.
Treatment of Angina Pectoris and of Intermittent Claudication. Tiemann.—p. 475.
Phrenic Exeresis. A. Neddermeyer and G. Walther.—p. 476.
Automobile Gas Poisoning. Grassl.—p. 478.
Demonstration of Cavities of Right Side of Living Heart and of Pulmonary Artery by Means of Contrast Medium. W. Forssmann.—p. 489.

Roentgen and Obstetric Observations on Quadruplet Pregnancy. A. Hermstein and G. J. Pfalz.—p. 492.
Rare Sport Accident: Tearing of Achilles Tendons. Mackenstein.—p. 496.
Subepidermoidal Carcinoma of Mamma. H. Fischer.—p. 497.

Bacillemia in Urogenital Tuberculosis. — Lichtenstern determined whether, in the various tuberculous diseases of the urogenital system, bacilli are present in the blood and what relation their presence in the blood has to the disease process. The bacteriologic tests were made according to Löwenstein's cultivation method (*München. med. Wchnschr.* **77**:1662 [Sept. 26] 1930; abstr. THE JOURNAL, Dec. 6, 1930, p. 1787). On the basis of his observations the author reaches the following conclusions: 1. Detection of bacilli in the blood permits often an early diagnosis of urogenital tuberculosis, for in several cases it was found that bacillemia was demonstrable earlier than bacilluria. 2. Bacillemia in patients who have undergone surgical treatment on account of urogenital tuberculosis is a sign of persisting tuberculosis. 3. Absence of tubercle bacilli from the urine alone is not sufficient proof to declare the patients as completely cured, but the blood should likewise be free from the bacilli.

Zentralblatt für Chirurgie, Leipzig

58: 705-768 (March 21) 1931

Lumbar Incision in Appendectomy. K. Mermingas.—p. 706.
*Discussion of Principles of Operative Treatment of Exophthalmic Goiter. E. Seifert.—p. 708.
Operative Treatment of Exophthalmic Goiter. F. Starlinger.—p. 714.
Exophthalmic Goiter and Thymus. E. Melchior.—p. 717.
Primary Carcinoma of Liver. H. Neuffer.—p. 719.
Indications for Intravenous Pyelography. S. Perlmann.—p. 721.
Treatment of Rupture of Extensor Tendon of Terminal Phalanx of Finger. O. Stracker.—p. 727.

Discussion of Principles of Operative Treatment of Exophthalmic Goiter.—Seifert reports his observations on goiter surgery, which he made in several of the important clinics in the United States, and then compares the American method with that employed in Germany. He states that the principle of the preservation of the tissues and the careful consideration of the anatomic conditions, which in Germany are considered of primary significance, are, to a certain extent, in contrast to the great rapidity with which goiter operations are done in America. A comparison of the mortality rates indicates that the rapid American technic, in which less consideration may be given to the anatomic conditions, brings the better results, and the author thinks that the rapidity of the American technic, which reduces the operative trauma, may, in the case of goiter operations, perhaps be of greater benefit than the careful preservation of tissues. The author comments favorably also on the American method of anesthesia, the gas-oxygen anesthesia. This, together with the preparatory iodine treatment, with the careful selection of the most favorable time for the intervention, based on metabolic tests, and with the systematic technic of the operation, may explain the favorable results obtained in the large American clinics. However, the author questions whether German surgeons should depart from their former method and adopt the entirely different American method, especially since in many external factors the American and German conditions differ completely. He also points out that the low mortality rates which he quoted for America were those obtained by experts in this field of surgery, whereas the German and European statistics, which he cited for comparison, were averages of many clinics, some operations having been done by less experienced surgeons.

Zentralblatt für Gynäkologie, Leipzig

55: 705-1120 (March 14) 1931. Partial Index

*Functional Behavior of Vesical Ostium of Ureter Following Nephrectomy or After Deep Bisection of Ureter. B. Ottow.—p. 767.
*Roentgen Studies on Etiology of Urethral Incontinence. F. von Mikulicz-Radecki.—p. 795.
*Irritation from Pessary and Carcinoma of Vagina. G. von Wolff.—p. 942.
*Morphologic Degree of Maturity of Genital Carcinomas and Its Significance for Ray Therapy. G. Döderlein.—p. 968.

Functional Behavior of Vesical Ostium of Ureter Following Nephrectomy.—The opinion that every action of the ureteral ostium in the bladder is the motor termination of a peristaltic wave, which originates in the renal pelvis and passes along the ureter, is, according to Ottow, not always correct. Consequently it is not advisable to judge the function of the entire ureter by the action of the ostium. Of course the peristaltic action of the ostium is a part of the motor action of the ureter; however, it should be considered that in spite of this it has a certain functional independence, which becomes evident especially in pathologic conditions. For instance, it is known that the ureter may be occluded by a calculus and yet its ostium be active. To be sure, the type and course of the actions of the ostium are in such cases generally somewhat abnormal. The peristalsis of the vesical ostium of the ureter is given attention in every cystoscopic examination for this reason and also because it is often considered in the diagnosis that it is important to know the changes which it may undergo. Following a detailed description of the anatomy and the physiology of the ureters the author reports the results of cystoscopic after-examinations on the ureteral ostia in patients in whom either the kidney or the ureter had been extirpated. He comes to the conclusion that the vesical ostia of ureters without kidneys or ostia without ureters perform actions which are typical in regard to their movements as well as in regard to their intervals. Of course this applies only to the ureters and ostia without pathologic changes in the walls. The intervals are usually longer than under normal conditions. The actions of the ostium can still be observed many years after the mutilating intervention and it is probable that they continue during the entire lifetime. The correct estimation of the action of the ostium requires prolonged cystoscopic control. Short observations may lead to the mistaken assumption of absence of motility.

Roentgen Studies on Etiology of Urethral Incontinence.—In his roentgen investigations on the etiology of urethral incontinence, von Mikulicz-Radecki made side exposures of the patients while standing, and also when they were reclining. He describes the technic of the examinations which he performed on thirty-five women. Twenty-three of these had urethral incontinence, whereas the other twelve were normal and served as controls. If innervation disturbances of the sphincter are disregarded, there are three factors which might cause urethral incontinence; namely, (1) direct injury of the muscles of the sphincter (tearing, scars and atony), (2) descent of the connective tissue supporting the trigonal section of the sphincter, and (3) injury of the sphincter attachment in the urogenital diaphragm. All these factors are mainly caused by obstetric injuries, and in many cases of incontinence all three factors are involved.

Irritation from Pessary and Carcinoma of Vagina.—Von Wolff points out that although the etiology of carcinoma is as yet not entirely clear, it is generally assumed that in many instances chronic irritation is a causal factor. He describes three cases of vaginal carcinoma in patients who had worn a ring pessary for many years. The literature indicates that primary carcinoma of the vagina is comparatively rare even in women who wear pessaries. But in the three cases reported the pessaries had never been changed in spite of long continued vaginal discharge. Only when hemorrhages and pains set in, medical advice was asked. It is probable that besides the irritation other factors, such as the advanced age of the patients, predisposition and infection, may have been etiologic factors.

Morphologic Degree of Maturity of Genital Carcinomas.—Döderlein stresses that in the irradiation of carcinomas the primary ray susceptibility is of greatest importance. There are cancer tissues which react well to roentgen or radium rays and there are others which react badly, no matter whether the growth is limited or extensive. In no other way could it be explained that sometimes inoperable tumors are favorably influenced by irradiation, whereas in tumors which are still in the beginning stage, irradiation frequently fails. The author discusses the various degrees of maturity of the different cancers of the genital tract and then reports his observation on the reaction to irradiation. His observations were made on 422 cases of genital cancers; namely, on 362 carcinomas of the cervix uteri, on seventeen of the corpus uteri, on thirty-one of the vagina and on twelve of the vulva. He found that the adenocarcinoma of the cervix uteri has the most unfavorable diagnosis, irrespective of the degree of maturity. The histologic character of carcinoma of the cervix is of importance only in that adenomatous cancers, no matter how far their growth has

progressed, yield to irradiation much less readily than solid carcinomas. In the solid cancers of the cervix there is no marked difference in the number of cures in immature and in mature carcinomas. The adenocarcinomas of the corpus uteri have a more favorable prognosis than those of the cervix. Eleven out of seventeen were cured. The mature growths reacted better than the immature growths. Of the thirty-one patients with primary carcinomas of the vagina, only five recovered. In two of these five cases there existed mature squamous cell epithelioma, in one case a squamous cell epithelioma of medium degree of maturity and in one case an immature solid carcinoma. Of twelve carcinomas of the vulva only two were cured, and both were mature squamous cell epitheliomas.

Vrachebnaya Gazeta, Leningrad

No. 3: 161-248 (Feb. 15) 1931. Partial Index

*Present Status of Neurosyphilis. M. Astvatzaturov.—p. 165.
Typhoid: Clinical Characteristic of Present Epidemic. N. K. Rosenberg.—p. 172.
Gastro-Intestinal Diseases in Red Army. V. H. Tchireykin.—p. 177.
Relation Between Respiratory Arrest and Acidosis. L. M. Truschtalevskaya.—p. 185.
*Early Diagnosis of Pregnancy with Phosphotungstic Acid. S. L. Bebchuk.—p. 189.
Blood Transfusion in Postpartum Hemoglobinemia. J. Z. Martov.—p. 191.
*Cardiac Arrhythmias. A. A. Abramson.—p. 219.

Present Status of Neurosyphilis.—Discussing the great progress of syphilology for two decades and mentioning the optimistic conclusions the modern physician has made in regard to the diagnosis and therapy of syphilis, Astvatzaturov shows the necessity of revision of this optimism concerning neurosyphilis. He puts foremost three points: 1. Is it possible to make in a syphilitic patient, on a serologic basis, any prediction with regard to development of neurosyphilis in the future? 2. Is it possible to prevent neurosyphilis with arsphenamine therapy? 3. Should neurosyphilis be treated by arsphenamine? These questions are at present of great importance. The author emphasizes that the Wassermann reaction is nonspecific for syphilis not only biologically but also practically; i. e., as was proved long ago, it could be positive in various other diseases (malaria, leprosy and scarlet fever). On the other hand, it can be negative when syphilis is present clinically. Many patients have been observed in whom neurosyphilis developed while their Wassermann reaction was negative for years. Therefore, a negative Wassermann reaction is not a guaranty at all that the individual will not be affected with neurosyphilis in the future. To avoid the gross mistake which so many practitioners are making in pronouncing their patients cured, the author stresses the supremacy of the clinical signs over all others. The practitioner should be guided only by them in making his prognosis on neurosyphilis in the future. Also in establishing a suitable syphilis therapy, serologic reactions are not of much value. Science has not yet developed means by which one can positively exclude the possibility of neurosyphilis developing in a patient with a history of syphilitic infection. In regard to his second question, the author states that antisyphilitic therapy in general and arsphenamine therapy in particular are unable either to prevent or to postpone neurosyphilis. As to the recent complaints in the special literature on some unfavorable by-effects of arsphenamine therapy, the author brings out that, although he has done extensive work in this direction, he has not yet come to any definite conclusions. But the statistical investigations on tabes made on quite a large scale by a collaborator demonstrate that the incubation period in patients treated with arsphenamine was much shorter (seven years) than in those who have not been under arsphenamine therapy (twelve) or who have been given treatments with mercury (fourteen). All observations mentioned indicate that there is no use to talk about arsphenamine therapy as the specific or preventive treatment for neurosyphilis. The author's third problem is closely related to the subject of the nature of neurosyphilitic phenomena. There is no doubt about their ultimate connection: it is only not quite clear what is the nature of such a connection, of the pathogenic relationship between syphilis and neurosyphilis. All recent efforts to cure neurosyphilitic phenomena with arsphenamine have been unsatisfactory. The new way of approaching it lies not in the sphere of antisyphilitic medicaments but in "nonspecific" therapy (malaria). The unfavorable by-effects of arsphenamine therapy in the treatment of neurosyphilis (encephalitis, "neurorecidives") which are not peculiar to other antisyphilitic agents, force the practitioner not only to withhold their use in the treatment of neurosyphilis but to avoid them in many purely syphilitic conditions of the nervous system, as the latter ones are easily treated with mercury and the iodides. The author summarizes his conclusions as follows: 1. All serologic, cytologic and chemical methods of diagnosis of syphilis and neurosyphilis must be taken into consideration only in connection with the clinical examination. 2. The negative results of the laboratory examinations cannot serve as a sign of a complete cure and do not exclude the possibility of neurosyphilis in the future. 3. As there are no methods of diagnosis which will completely eliminate the possibility of neurosyphilis in the future and there are not developed yet means for its preventive treatment, the practitioner never has the right to pronounce the patient completely cured. 4. With the modern methods of syphilis therapy one cannot prevent or cure neurosyphilis.

Diagnosis of Pregnancy with Phosphotungstic Acid.—Bebchuk points out that although the best reaction on pregnancy is given at present by the Aschheim-Zondek method, in his country practice he preferred the Mertz reaction for pregnancy with phosphotungstic acid, which is very simple: To 1 cc. of blood serum (hemolytic serum might be used as well) he adds 1 cc. of the reagent (2.8: 1,000) and leaves the tubes for half an hour at room temperature. During this time the serum of the pregnant women becomes turbid. One might add after half an hour two or three drops of bromophenol as an indicator; the serum of the pregnant will turn light blue while the normal serum will remain clear. Centrifugation is not necessary. On the basis of 303 cases observed (216 women pregnant, 20 nursing, 10 healthy with delayed menses, 23 with gynecologic disorders, 19 with cancer of various pelvic organs and 15 males) he found that the reaction is positive in 90.2 per cent of all pregnant cases. The author thinks that the second part of the reaction is not of great value and with bromophenol unavailable it may be omitted. The hemolytic serum is, of course, of no use for the color part of the reaction. Mertz's reaction is of great diagnostic value in almost 90 per cent of all patients with delayed menses, although it does not explain the causes of such a delay and is undoubtedly unable to give any definite points in the differential diagnosis. The reaction is distinctly noteworthy because of its simplicity and easy application in dispensary and office practice.

Cardiac Arrhythmias.—Abramson reviews various types of arrhythmias and brings out to what extent at present the study of arrhythmias due to the modern laboratory methodology is developed. His aim was particularly to emphasize the possibility in the vast majority of the so-called heart cases to make a correct diagnosis without the aid of the apparatus. As one cannot be satisfied at present with the general term "heart trouble," so by ascertaining one's arrhythmic pulse one has to go further. It is necessary to determine to what type of arrhythmia it belongs. Then the diagnosis will be markedly improved, the prognosis will become clearer and it will be possible to approach the final stage, i. e., the correct therapy.

Nederlandsch Maandschrift voor Geneeskunde, Leyden

17: 495-550, 1931

*Chronic Ileus of Duodenum in Infants, Due to Periduodenal and Peripyloric Membranes. E. S. Frank.—p. 495.
Cystopyelitis with Myeloid Reaction of Blood in Mongolian Subject with Congenital Cardiac Hypertrophy. J. Haverschmidt.—p. 511.
Pneumonia Simulating Appendicitis. E. Gorter.—p. 521.
Lasègue's Sign Viewed from Standpoint of a Constitutional Disturbance. L. Goldberg.—p. 527.

Chronic Ileus of Duodenum in Infants, Due to Periduodenal and Peripyloric Membranes.—Frank states that periduodenal and peripyloric adhesions may cause a chronic ileus of the duodenum in infants just as in adults. This chronic ileus is characterized, as a rule, by severe vomiting, which is resistant to internal therapy. The vomiting may begin immediately after birth or much later. In some cases the vomiting may be absent, but the evacuation of the stomach or the passage of the food through the duodenum is associated with pain. The symptom of delayed evacuation of the stomach and also

the roentgen examination may be of great importance for the recognition of chronic ileus of the duodenum. The adhesions are not the result of an infection but are to be regarded as the anatomic substratum of an anomaly in the development of the fetal peritoneum. The prognosis of this anomaly depends on its localization and may be serious. The treatment is preferably surgical, since only surgical treatment is capable of remedying permanently the organic disturbance.

Nederlandsch Tijdschrift voor Geneeskunde, Haarlem

75: 1405-1516 (March 21) 1931

Bronchopneumonia in Young Children. J. Haverschmidt.—p. 1409.
*Peculiar Manifestations in Tumors of Hypophysis. J. M. Noothoven van Goor and G. A. Schaly.—p. 1422.
Anatomophysiology of Inferior Olivary Body. L. J. J. Muskens.—p. 1438.
Skin Cancer Produced in Mice by Carbon Dioxide Snow. B. J. Mansens.—p. 1444.

Peculiar Manifestations in Tumors of Hypophysis.—Noothoven van Goor and Schaly found in tumors of the hypophysis the following peculiarities: (*a*) Xanthoma diabeticorum generalisatum: In acromegaly various disturbances of carbohydrate exchange occur; not only a frank insular diabetes, which may be associated with xanthoma generalisatum tuberosum, hypercholesterolemia and lipemia as rare complications, but also a noninsular diabetes with a blood sugar curve characterized by a persistent reactive hypoglycemia after ingestion of dextrose. (*b*) Edema of the cornea with hypercholesterolemia in diabetes: This peculiarity is found in acromegaly. A diet poor in cholesterol is of aid in this disorder. (*c*) Neurologic ileus: The chronic constipation, leading to ileus, which develops in connection with a dystrophia adiposogenitalis, must be regarded as a neurologic ileus.

Finska Läkaresällskapets Handlingar, Stockholm

73: 81-162 (Feb.) 1931

*Present Questions in Scarlet Fever. A. Lichtenstein.—p. 89.
*Psychogenic Anorexia in Childhood. E. Lövegren.—p. 115.
Phenomena of Muscular Exhaustion. D. Rancken.—p. 121.

Present Questions in Scarlet Fever.—Lichtenstein states that the frequency curve of the positive Dick reaction for different ages, according to examinations in about 2,700 persons, agrees closely with the frequency curve according to age in the cases of scarlet fever in Stockholm. In 575 cases tested weekly the Dick reaction was positive in more than 60 per cent during the first week and usually became negative in the later course; 10 per cent remained positive. Treatment with convalescent serum in over 700 grave and moderately grave cases since 1916 gave good results. Treatment with scarlet fever antistreptococcus serum in between 600 and 700 grave and moderately grave cases since 1925 was effective in uncomplicated cases. Experiments with passive immunization with convalescent serum or scarlet fever antistreptococcus serum resulted at the best in a transient immunity. Active immunization with scarlet fever streptococcus toxin produced unpleasant by-effects when large doses were used and the immunity set in slowly. The author's experiments with a combined passive and active immunization seem to him to encourage further attempts along these lines.

Psychogenic Anorexia in Childhood.—In the four cases reported by Lövegren in children aged 6 years, 18 months, 10 months and 18 months, respectively, the pathogenesis is believed to be of the exogenic-psychic kind. Only in the first case could a neuropathic basis be established.

Hospitalstidende, Copenhagen

74: 211-238 (Feb. 19) 1931

*Studies on Jaundice: III. Leukocyte Picture in Diseases of Liver and Biliary Tract, Particularly in Acute Hepatitis. T. Geill.—p. 211.
Treatment of Dementia Paralytica with Infectious Diseases. V. Hendriksen.—p. 228. C'td.

Leukocyte Picture in Diseases of Liver.—Geill says that neutropenia in connection with lymphocytosis generally suggests hepatitis, neutrophilia without simultaneous lymphocytosis, cancer of the liver or cancer of the pancreas.

74: 265-292 (March 5) 1931

*Results of Lack of Vitamins in First Year of Life: Dental Caries and Vitamins. C. E. Bloch.—p. 265.

Results of Lack of Vitamins in First Year of Life.—Bloch concludes that lack of vitamin A in man has no specific injurious effect on the formation or calcification of the teeth, that the tendency to dental caries is therefore not due to the lack of vitamin A in childhood, and that the same probably holds for vitamins B and C. The main cause of dental anomalies in man is abnormalities in the mineral metabolism in the period of calcification of the teeth. His investigations show that, of the children with a history of xerophthalmia due to lack of vitamin A, barely two thirds reach the age of 8. After that time development is normal. Except in the cases of advanced keratomalacia, the lack of vitamin A leaves no characteristic defects.

74: 321-348 (March 19) 1931

*Occurrence of Landsteiner's "Immune Receptors" M and N and Significance in Paternity Cases. O. Thomsen and J. Clausen.—p. 321.
Forensic Application of Late Syphilitic Humoral Syndrome. A. Wimmer.—p. 331.
*Gangrenous Pulmonary Abscess Treated with Phrenic Exeresis. S. Hauschildt.—p. 342.
Is Avitaminosis F (B_1) Methylglyoxalic Intoxication? P. Vogt-Møller.—p. 344.

Landsteiner's "Immune Receptors" M and N and Significance in Paternity Cases.—Thomsen and Clausen found M in 74.6 per cent and N in 70.1 per cent of 442 healthy persons and 138 patients with various disorders. Both M and N were found in 44.6 per cent. In no case was there simultaneous absence of both M and N. In examination of 105 children and their parents, M and N appeared as dominant characteristics independent of each other (Landsteiner and Levine), and the conception of two allelomorphic genes is confirmed. By combination of the subtypes M, MN and N with the six known types (O, A^1, A^2, B, A^1B, A^2B) mankind can be classified into eighteen types (groups) and the exclusion of a wrong father is theoretically possible in about 40 per cent of the cases. The results do not include investigation on the immune receptor P (Landsteiner), as it occurs in the European population only in exceptional cases.

Gangrenous Pulmonary Abscess Treated with Phrenic Exeresis.—In Hauschildt's case of gangrenous abscess in the basal part of one lung, originated after a septic infarct in a febrile puerperium, a more extensive intervention was contraindicated and phrenic exeresis gave good results.

Hygiea, Stockholm

93: 113-160 (Feb. 28) 1931

*On What Does Immunity in Tuberculosis Depend? E. Hedvall.—p. 118.
*Disturbances in Carbohydrate Metabolism in Toxic Goiter. A. Troell, H. Tyrenius and T. Olovson.—p. 130.

On What Does Immunity in Tuberculosis Depend?—While Hedvall established bactericidal substances active against tuberculosis in the blood serum, these substances do not, in his opinion, play an important part in causing immunity to tuberculosis. He inclines more to the theory that immunization against tuberculosis depends on a physiochemical change in the cells which decreases their susceptibility to tubercle bacilli, and advises a closer study of this change in the cells of the organism after a tuberculosis infection.

Disturbances in Carbohydrate Metabolism in Toxic Goiter.—Troell and collaborators found in their material of thyrotoxicoses eleven cases of spontaneous glycosuria and two of diabetes. They state that the glycosuria does not contraindicate thyroidectomy and does not in itself aggravate the prognosis, nor does the diabetes contraindicate operative treatment after proper preoperative treatment, but requires careful control of the sugar regulation and possibly insulin treatment. In a series of 105 cases of toxic goiter, more than half showed a lowered carbohydrate tolerance after the dextrose tolerance test, these cases occurring more often in patients with than without increased systolic blood pressure. A fasting blood sugar value approaching pathologic values (from 0.11 to 0.12 Gm. per hundred cubic centimeters) or definitely pathologic (0.12 Gm. per hundred cubic centimeters) was noted in about one third of thirty-three cases of thyrotoxicosis tested. The maximum blood sugar value amounted to 0.1965 Gm. per hundred cubic centimeters. Indications are that a prolonged hyperglycemic curve and an increased systolic blood pressure are prognostically grave signs.